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THE ELEMENTARY SCHOOL JOURNAL

CONTINUING "THE ELEMENTARY SCHOOL TEACHER"

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EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Cleveland Foundation's "Follow-up" Campaign

The survey of schools of Cleveland, Ohio, was arranged for and financed by a local organization known as the Cleveland Foundation. It was this foundation which arranged for the weekly luncheons for interested citizens during the progress of the survey. Now the Foundation is continuing its campaign of publicity by the publication of the *Education Survey Bulletin*. The first number of this bulletin appeared on September 30; others are promised whenever occasion arises. Copies may be had by addressing the Survey Committee of the Cleveland Foundation, Room 404, 2025 East Ninth Street, Cleveland.

The first number of the *Bulletin* gives the following summary of facts about the survey:

Time: 15 months, April, 1915–June, 1916.

Basis: 1,000,000 tests of pupils' ability and progress; records and reports for fifteen years; 1,553 visits to classrooms.

Findings: 25 booklets on public education in Cleveland; 428 subjects treated; 306 descriptions; 57 commendations; 65 criticisms.

Results: 32 recommendations already approved by Board of Education.

Cost: $50,000.

Staff: 17 specialists and 5 assistants have been employed in the Survey in addition to 8 editorial, clerical, and drafting assistants, making a staff of 30 in all. Of the 22 specialists and assistants, 20 have had teaching experience. The two who have not had such experience have not been employed in school

visitation. Of the 22 specialists and assistants, 12 have held positions as principals of elementary, high, normal, or industrial schools, and 10 have held positions as superintendents or assistant superintendents of school systems.

The notes on Cleveland schools which fill up the first two pages of the *Bulletin* are of such general interest that they are quoted in full:

More seats needed.—Cleveland was short 7,500 seats or 186 regular rooms for its school children at the time of the Survey. Each year 5,000 new seats or 125 new rooms are needed. This would mean $1,500,000 annually for new buildings, if the present plan of using school space continues. About $1,000,000 has been spent for new buildings each of the last few years. So school seats have been getting farther and farther behind the number of pupils. The school officials estimate they are 10,000 seats short.

New buildings are imperative.

How many?

Twelve $200,000 buildings according to present practice or two and a half millions' worth.

No plan can remove the need for buildings in new, rapidly growing sections, or in districts where old buildings need replacing. These requirements must be met.

Economical relief.—Present and proposed buildings can be made to accommodate 15 to 35 per cent more pupils than is being done. The platoon plan recommended by the Education Survey will do this.

The educational advantages of the plan, however, outweigh the financial. It adapts the famous Gary plan to a city with schools already built and to the best standards of teaching. Superintendent S. O. Hartwell put the system into operation at Kalamazoo with remarkable results.. Laggard pupils have become almost unknown.

Trial given.—Kennard School in Cleveland has been trying out the platoon plan. The principal and teachers have done their best to make it go. Many have said they would never go back to the old plan of their own will. They explain the number of failures after a three months' trial, by the many new or substitute teachers put in the school for trying the new plan, by the packing into the school two months before the plan started of all the pupils whom the school could care for when the new scheme should be put into effect, and by the necessity of failing nearly a whole class which should have been failed the year before.

The pupils showed marked improvement at the end of eight months.

The platoon plan must be extended gradually, as an increasing number of the teaching staff learn how to operate it.

What the platoon plan is.—All rooms in a school building are classified into two groups, "regular" and "special." The regular rooms are used for teaching reading, spelling, arithmetic, language, and history; the special rooms for

literature, writing, geography, music, physical training, manual training, and domestic science. The rooms are assigned to the "regular" or "special" groups in such a way that both groups accommodate equal numbers of pupils. This does not necessarily mean an equal number of regular and special rooms, for some special rooms like gymnasiums for physical training, or auditoriums for music and literature, can accommodate as many pupils as two or more regular classrooms. For example, a school building has 14 classrooms and a manual-training shop, a domestic science kitchen, an auditorium, and a gymnasium. These 18 rooms are divided into 10 "regulars" and eight "specials," but each group of rooms holds the same number of pupils, that is, 10 ordinary classes, making 20 in all.

The pupils also are divided into two shifts or platoons, A and B, of equal numbers. The platoons are divided into classes of the usual size. Each platoon spends half its time in regular rooms, and half its time in special rooms. Platoon A is in the regular rooms while Platoon B is in the special rooms, e.g., for half of each morning and afternoon session. Then they change places so that both platoons get the same amount of the subjects taught in regular and special rooms.

For instance, each of the several classes of Platoon A remain in a single regular room learning reading, spelling, arithmetic from a single teacher for half a morning session, while each class of Platoon B has been in three different special rooms being taught perhaps manual training, music, and writing by three different teachers. In the second half of a session, the platoons change places, each doing what the other did the first half.

Saving effected.—Such a school as described might serve 20 classes under the platoon plan while it held only 14 under the plan usual in Cleveland. For the usual plan fills up the 14 standard classrooms and then sends the pupils one room at a time for special work to gymnasium, manual training, etc., leaving the classroom vacant in the meantime. When no classroom is vacant these special rooms of expensive size and equipment lie idle. The platoon plan uses all the rooms all the time, and keeps public investment as constantly employed as private capital insists on being.

Many modifications of the plan described can be made. The lowest grades may be exempted from its operation. Some subjects may be taught in special rooms in one system and in regular rooms in another. But the principles can be applied to any school with modern equipment.

Adjustments required.—Special equipment has to be provided to hold the books and wraps of two classes for each regular room. In the special rooms several sized chairs must be used to fit the children of different ages. A good modern school can be adapted to the plan for $1,000. Practically the same amount of time as at present can be given to each subject. The only change in program is that some subjects, such as writing, geography, literature, are taught by special teachers instead of by the regular grade teachers. The cost of teaching per pupil is not increased, as there is only one teacher to each class

of standard size. Teachers with special aptitudes must be put in charge of special rooms, as they do specialists' work.

Advantages.—This platoon plan will relieve the regular teachers from the increasing number of "extras" like drawing and music, which have been the burden of the training and teaching of many women who would excel in the regular studies. The pupils gain the advantage of learning special subjects from those expert in them. A careful study of a teaching corps will discover many with such aptitudes and special training will supply more. So the problem of the overburdened course of study and teacher can be solved to the immense educational advantage of the pupils. Investment in school buildings can be made to yield 15 to 35 per cent larger return in housing children, which means a saving of from $22,000 to $55,000 on each new building. This saving or increased return in half the existing buildings can be secured for Cleveland by competent administration and would put to use all the time the 2,000 classrooms, 50 auditoriums, 50 gymnasiums, and 35 shops, a $10,000,000 investment.

What Parents Want

There came to hand some time ago a pamphlet inquiring for candidates who might be considered for positions in a private school. The pamphlet sets forth at some length what a group of parents think a school for their children should be. The statement is interesting reading as an indication that the demand for a liberal form of education is defining itself in the minds of parents as well as teachers. Indeed, some critics of the schools would say that parents know what they want even better than do the teachers.

The pamphlet is too long to quote in full. Some significant extracts may be reproduced.

AN OUTLINE OF A PROPOSED BOYS' SCHOOL FOR WHICH A HEADMASTER OR TEACHER IS BEING SOUGHT

A number of men and women of Dayton wish to furnish educational facilities for their children in a manner which would be too great an innovation to be worked out at present in the public schools. The undertaking, until it becomes established, will provide only for six to twelve boys, from ten to seventeen years old. These are normal boys, whose parents have more than ordinary interest in their education. If the work should develop suggestions of value to our local public schools, one of our hopes would be realized. . . . .

Not being familiar with present-day theory and practice of education, we must depend on the man or men whom we secure to be qualified, and to direct us in our efforts. But we have some fairly definite opinions, the following statement of which will indicate our point of view.

Technic.—Certain studies, including reading, writing, arithmetic, spelling, and English composition, have for their chief aim the development of the technic of living. When we realize clearly that this is their object, we see how these and similar studies may be presented so that the technic acquired is that of actual life. The following example, one of many possibilities, indicates how a knowledge of these subjects may be gained, together with other knowledge of general use.

Among acquirements which reduce the embarrassments and inefficiency of everyday material life is an experimental knowledge of commercial habits, rules, and methods; of the art of being solvent, of appraising accurately one's possessions, and of making correct measurement and judgment of material values. Therefore, one phase of the school might be its organization as an industrial plant where its activities would be studied; where income and outgo, and the cost and value of the boys' manufactures or other production would be analyzed; where the significance of budgets and of auditing methods might be acquired, and where the relation of industry to moral standards might be developed. The teaching of common school subjects can be interwoven with all these interests. The legal incorporation and operation of a company by the boys for handling their business affairs might be of educational value. Manual training will have added interest if the products of the boys' work have definite commercial or artistic value.

By such methods, proficiency in elementary and high-school subjects, as well as manual training, to some extent may be acquired coincidently with a knowledge of the usual contacts of everyday life, whether they be industrial, domestic, scientific, or cultural. . . . .

Appreciation of life.—Any education is vitally at fault which does not develop a habit of enjoyment of the finer resources of life. The companionship of the teacher should result in opening eyes and minds to the phenomena of natural science—to life-processes and habits of plants and animals, to the data of geology, of physics, and of astronomy; and to the appeal of good literature, poetry, history, and of the various forms of art. We admire Alfred Russell Wallace, who wrote on his eightieth birthday that the charm of life and of nature was as fresh to him as in his boyhood, and that his sense of wonder was not impaired.

The meaning of life.—Education is not complete if its aim is so to engross the attention of men and women, either in industrial, professional, or social life, or in the pursuit and enjoyment of culture, that they will not have time to ask themselves the question, "What is it all about?" . . . .

Manners.—The habitual expression of considerateness and good will and the elimination of social friction, through the mediums of courtesy, good manners, and good form should be acquired as essentials of a liberal education. School influence should supplement, or at least support, that of the home.

Training in independence.—Tempering and stabilizing of character should be aimed at, so that a boy will choose to stand on his own resources, will

initiate and complete undertakings without leaning on others, and will react effectively to stress or hardship.

Adventure.—The spirit of daring and of adventure, so nearly universal in youth, commonly is thwarted at every turn in a boy's life. Yet this is one of his highest gifts. When it is gone his greatest promise is past. The aim of the teacher should be to direct this spirit, making it count for the boy's development. . . . .

Relation of teacher to boy.—The ideal relation of teacher to boy would seem to be that of older friend and companion, though in acknowledged authority. Classical examples are the relation of Socrates to his young friends, and of Jesus to his twelve followers. President Garfield said his idea of a university was a log with his former teacher, Mark Hopkins, on one end, and a boy on the other.

One of our number attended an unusual village school. The master enforced little formal discipline. The study schedule was flexible, being sometimes interrupted while the entire school united in a venture of common interest. When phonographs were invented the school made one that would work, and became thoroughly familiar with the elementary principles of sound production. An aquarium made possible acquaintance with the life-histories of several animals. The building of school furniture gave every boy and girl a working knowledge of common tools. Reading together developed a taste for good literature. The member of our group referred to, except for learning at home to read and write, in less than four years under this man covered the work of the lower eight grades, and was prepared for high school.

These cases indicate roughly what we are thinking of. Bearing in mind always the need for maintaining progress approximately equal to that of our graded schools, the aims should be, not first of all to impart knowledge, but to open the boys' eyes and minds; to arouse interest, aspiration, and determination; to develop accuracy of observation and of judgment. . . . .

Individual instruction.—We are inclined to believe that best results may be secured when the boys receive individual instruction, rather than when they are taught *en masse;* that each boy should progress in each subject at whatever varying rate is normally possible to him, being thoroughly prepared at each step before he takes the next. The benefits of team work would still be secured, but in ways which do not require a retarding of the quicker and a crowding of the slower boys, in order to maintain a uniform rate of progress. . . . .

Junior High School in a Small System

The junior high school has often been organized in large school systems as a means of relieving a crowded high school or as a device for consolidating small seventh and eighth grades. Small school systems have been slow to organize the intermediate school because of the apparent difficulty of providing the new courses required.

The following clipping from the *Hancock County Courier* gives a full statement of the reasons accepted in New Cumberland, West Virginia, for organizing a junior high school in a small system:

For several years school people have been trying to devise a plan which will hold the pupils of the upper grades longer in school, give them work more adapted to their needs, and give them improved methods of instruction. Some schools attempted to do this by departmentalizing the work of the seventh and eighth grades; that is, the work is so organized that one teacher should teach, say, all the history in these two grades, another all the mathematics, etc. This plan seems good, for one teacher cannot be expected to teach all subjects equally well, and this plan gives her a chance to specialize along some particular line. This plan becomes impractical in the small school where there are but the two upper grades, that is, the seventh and eighth, for we should have but two teachers and consequently the work would have to be divided between the two, and no teacher would have a chance to specialize. The junior high school, or combination of the seventh and eighth grades with the high school, includes all the good points of the above plan and will (1) recognize individual difference and group pupils according to interests and ability; (2) departmental teaching will be introduced and pupils will be promoted by subject rather than by grades; (3) there will be opportunity for pupils to explore several fields to find where they are fit; (4) an earlier introduction of subjects now confined to the high school will be possible; (5) it makes easier the transition into the high school; (6) it will decrease the elimination; (7) it will furnish opportunities for reforms in instruction because it is not bound by tradition; (8) it will improve the lower grades and raise the standards of the high school.

In our own school last year one teacher was obliged to teach both seventh and eighth grades; this year the pupils in these two grades are taught by four different teachers, the recitation periods are the same length as in the high school, the same methods of instruction are used, and the pupils are given the opportunity to take different work. Later on these pupils will be given the opportunity to take commercial work if they care to.

The nearest junior high school outside of our city is in Pittsburgh, Pa. They declare it an unqualified success.

We now have enrolled in both junior and senior high schools about 125 pupils.

The following are the courses of study given:

JUNIOR HIGH SCHOOL, GENERAL COURSE

SEVENTH YEAR

English (reading and language)	Civics
Arithmetic	Writing
Physiology	Spelling
American History and Community	

EIGHTH YEAR

English (grammar, literature, and reading)	Spelling
Arithmetic (some algebra given)	Latin, I
General Science	Commercial Arithmetic
History and Community	Commercial Law and Geography
Civics	Bookkeeping
Writing	Typewriting

NOTE.—Last five subjects are elective.

NINTH YEAR

Latin, I	Commercial Arithmetic
Algebra, I	Commercial Geography and Law
English, I	Bookkeeping
General Biology	Typewriting

NOTE.—Last five subjects are elective.

Tabulating School Records

Mr. Wilford E. Talbert, the director of reference and research of the school system of Oakland, California, carried on recently, with the co-operation of Mr. J. J. Anderson of the Tabulating Service Bureau of San Francisco, a test of the cost and efficiency of the mechanical method of tabulating school reports as compared with the "old method" of having the work done by principals in their spare time. Mr. Talbert has prepared a very interesting report giving an account of the test. The report is well worth securing and reading in full. The following extracts will serve to show the character of the test:

In order that the Service Bureau might be enabled to get all of the original data direct from the teachers, each teacher was requested to copy all of the data from all of the other reports given to her principal on a special mimeographed sheet. Every item on every sheet was later checked by the office to be sure that no errors in copying remained uncorrected. School names, teachers' names, etc., were then given code numbers so that nothing but numerical data remained on the sheets.

What the Service Bureau did with it.—The first operation in the tabulating machine system is "punching the cards." This consists in punching on uniform-sized cards the information from the teachers' reports. The cards are then compared with the original reports to insure their accuracy. Next, the sorting machine sorts the cards for any desired information they may contain, such as "school," "grade," "size of class," etc. And, finally, the tabulator consolidates the desired information. Thus, if enrolment by grades is wanted the sorter puts all the grades into their appropriate groups and the tabulator

shows how many pupils there are in each grade, the total for all grades, and the number of cards that went through the machine. The machine operator sits at a typewriter and types the totals as they appear in the tabulator. An adding device on the typewriter shows the same grand total as the tabulator at the end of the report, thereby proving that no errors have been made either in tabulating or in typing.

The tabulating machine system.—The electrical tabulating machine was first used by the United States Census Bureau in 1893, but it was not until several years afterward that it was finally adapted for use in commercial and other establishments with a smaller amount of statistical work to be done. Within recent years, however, the machines have been used in practically every kind of business and for practically every statistical purpose. Many business establishments now use the machine method even in place of the old conventional form of bookkeeping. Some of its advantages will appear in the following report of our own experiment.

Time taken to complete reports.—If reports are to be used for administrative purposes they must be put into usable form while there is still opportunity to profit by the information they contain. A monthly report should enable the administration to remedy conditions during the succeeding month.

In our experiment we noted that many of the principals find difficulty in completing their reports within the week allowed by the rules of the Board, and that numerous errors in copying and calculation which are discovered later make it necessary either to defer the monthly report for the greater part of four weeks or else to give the Board and Superintendent a report which will almost immediately be subject to correction. In either case there is considerable delay in securing accurate information.

The tabulating machine system, on the other hand, tabulated more than twice as much information as the principals, and submitted, in just two and one-half days from the time they received the data from the teachers, a typewritten report in which it was mechanically impossible for errors, either in copying or in calculation, to exist.

Correctness of reports.—If it is important that reports be completed in a reasonable time, it is even more important that they be reliable. In fact, a great deal might be said concerning the merits of accuracy in school reporting. Through an unwritten law of professional ethics it has become customary for bookkeepers to spend even days of time trying to correct an error of a few cents in order that their books may be in perfect balance. But for other forms of accounting no such law exists. It is customary in ordinary school reports to check carefully the attendance column because it represents money, but to take all other reports at their face value. An extreme case of the results of thus taking reports at their face value was discovered last summer when one particular school reported as on hand over 200 more copies of a particular textbook than were sent to it in the first place, notwithstanding the fact that the records showed that a large percentage of the books charged to it had been lost.

It is hard to reconcile such extreme accuracy in financial accounting with the almost extreme laxness that pervades school accounting of other things representing money value. And if there is inconsistency here, there is even more inconsistency when we consider the neglect of accurate accounting for non-promotion, eliminations from school, etc., where the lives of future citizens are vitally concerned.

The errors which creep into school reports constitute no reflection upon the intelligence of school officers. They are the type of errors commonly found in the statistical work of persons whose work is not clerical in nature and such as even professionals are bound to make from time to time. In fact, wherever the human element enters into statistical work there are apt to be such errors as: (1) mistakes in calculation; (2) mistakes in copying; (3) entering the proper figures in the wrong column.

By the present system of collecting statistics there are numerous possibilities for error because of the necessity for copying data so many times, and also because of the large number of different persons upon whose work the final results depend. Besides, the conditions under which school officers labor are not conducive to accurate statistical work even if they had enough clerical duties to make them expert in the handling of figures.

The result of the old system has been that, particularly at busy seasons, a large percentage of the principal's reports have had to be corrected or, at times, even to be completely made over. In spite of the fact that most of these errors are small, they nevertheless occasion a great deal of confusion—necessitating telephone calls, interruption of school work, changes in the office records, and the revision of statements already given to the public. As an example of the confusion resulting from correcting errors, it may be stated that a single change in the attendance column (on which money is apportioned) necessitates 16 changes in the office records besides the changes necessary in statements which have previously been given out by the office.

At the end of the year the confusion is even greater. The law requires each principal to make an annual report for his school. But the sum of these annual reports by schools seldom gives the same results as the annual report by months for the city as a whole. This is due both to errors in the principals' summaries and to changes which the schools have made which have not been reported to the office. The result is two different annual reports for the city, both of which are wrong.

Of course the tabulating machine system will not eliminate all errors. It will still be dependent upon the correctness of the original data given by the teachers, and there will still be a small chance for error in punching the cards. In the latter case, however, the work will be done by a regular clerk in ideal circumstances and there will be only one person to make errors. All mistakes due to computation or to copying (by far the bulk of the errors in principals' reports) will be absolutely eliminated by the machine; also the possibilities of error in the numerous copyings which will be saved in the superintendent's

office. The reason for this is that a given fact by the machine system is entered once and once only, and that all computations are purely mechanical. Even the typing of the final results is mechanically checked for accuracy. In the entire report rendered us by the Tabulating Service Company we found but one error, and that was due to the illegible writing of a teacher.

COSTS

Since the only possibility for error in the tabulating machine process consists in punching the cards, the Tabulating Service Bureau usually prefers that patrons punch their own cards. This requires buying a key-punch which costs $50. Anyone can operate it like an adding machine, and the average operator soon learns to punch as high as 2,500 cards per day. We use less than 1,100 cards per month. The cards themselves cost $1.00 per 1,000 printed and delivered.

Once the cards are punched, the Tabulating Service Company offers to tabulate any information we want for $25 per day, or they offer us a flat rate of $50 per month for two days' work per month with occasional special reports free as we may require them.

The machines which the Service Company uses can be rented and operated by ourselves, the rental being from $65 to $75 per month, depending upon the type of the machine. We should then be able to use them all the time in all departments or even to do work for other departments of the city government at a reasonable rate.

EDUCATIONAL WRITINGS

The first number of the first volume of the *Journal of the National Education Association* was issued late in September. It is made up of 95 pages of reading-matter corresponding exactly to the first 95 pages of the volume of proceedings which has heretofore been published annually by the Association. The second and third cover pages are used for the announcement of the new officers of the Association and for a brief description of the publications of the Association.

In this form the *Journal* brings to the members of the Association at a date earlier than has heretofore been possible a part of the proceedings of the annual meeting. Subsequent numbers appearing each month will serve a like purpose. Strict adherence to this reportorial function, however, deprives the *Journal* of any character as a periodical publication. It is doubtless advantageous that the elaborate proceedings of the annual meetings should be sent out promptly and that readers shall be induced to read the papers because they come in small doses. But there are current activities of the Association which should have some way of expressing themselves before they are crystallized into that finished and often final form which they exhibit in the proceedings.

For example, there are several committees at work in the Association. Some of these would profit greatly in their work if they could communicate in a preliminary way with the members of the Association. Some committees want co-operation or special types of information. The *Journal* of the Association should be available as an avenue of communication.

Again, the Association publishes from time to time bulletins announcing the programs of the Association and containing important statements of policy by the officers of the Association. These bulletins are thin, irregular publications. Therefore, like all irregular printed matter, they are almost inaccessible to all except those who methodically file what they receive through the second-class mail. Why should not the *Journal* carry this type of material?

The opening of the pages of the *Journal* to committees and to officers would not be showing partiality to educational enterprises, because the official character of the types of communication referred to is already recognized by the Association in that the committees and officers have been duly authorized to represent the Association.

There is objection in some quarters to this *Journal*, and the Secretary is undoubtedly wise in holding rigidly to the form of the proceedings during the early issues. Some editors are afraid of competition. Some anxious members are afraid that overzealous writers will exploit the *Journal*. There will, therefore, be much hesitation in launching any new department of the *Journal*. But the enlargement is logical and highly desirable. There ought to be a great central national journal of education. There ought to be the most unlimited support for such a journal. So far as the *Elementary School Journal* is concerned, this Volume I, Number 1, of the Association's new journal is a most welcome addition to the agencies which are devoted to the spread of educational information. May the *Journal* enlarge its sphere of operations and influences as rapidly as possible.

Supervised study is advocated everywhere in recent educational writings, but there is very little definite advice either to teachers or to students about how to carry on the studying process. Two additions to the literature telling how to study will be found very useful, therefore, even though they were not written primarily for elementary-school pupils or teachers.

Professor Whipple,[1] writing in the form of direct advice to high-school students, has brought together in thirty-eight formulated rules of procedure the best single statement of the psychology of study that has ever been formulated. Each rule is stated and illustrated. The discussions are clear and interesting. They can be followed easily by pupils in the upper grades, and all elementary teachers can use the teachings of the book even if they do not put the book itself into the hands of their pupils.

The first maxims relate to physical conditions and show the importance of proper hygienic conditions for study. Next comes

[1] *How to Study Effectively.* By Guy Montrose Whipple. Bloomington, Ill.: Public-School Publishing Co., 1916. Pp. 44.

a series of maxims relating to what might be called the habituation side of the process: Have a regular place and time for work, and so on. Then come arguments in favor of concentration and organization. The author does not make it all appear easy. One must learn by heart some of the items needed; one must review and think over his work.

The following quotation gives a typical view of the way in which Professor Whipple has driven home his maxim by an apt illustration (p. 16):

> Do your work with the intent to learn and to remember.
>
> Laboratory experiments with memorizing under different conditions show very clearly that one of the most important conditions of good memory is the taking of the attitude of "intent to remember" when the materials to be learned are presented. Closely allied with this is the attitude of "confidence" in one's ability to remember what one is learning. An illustration may be seen in the following incident. I once had occasion to read aloud a list of words to a student enough times so that he could recite them correctly. I repeated the process with a second and with a third student. I then discovered to my amazement that I was unable to recite the list by heart myself. Here not only the most charitable, but also the psychologically correct explanation is that I never *intended* to learn the list myself. I had repeated it mechanically and not in the memorizing attitude.

At the end of the book is a list of readings which deal with like topics.

The second volume[1] on this general topic is by Professor George Van Ness Dearborn. This book is very different in its method of attack from Professor Whipple's book. Professor Dearborn reviews many of the psychological and physiological discussions from which principles of procedure in study may be drawn. He also emphasizes certain special aspects of the processes of study, such as the cultivation of imagination.

Taking this topic as typical of Professor Dearborn's whole book, it must be said that one finds more about imagination in a broad, general, abstract way than one finds of practical formulas for the cultivation of imagination. Take, for example, pp. 112 and 113, where the author gives some of his most practical paragraphs.

[1] *How to Learn Easily.* By George Van Ness Dearborn. Boston: Little, Brown & Co., 1916. Pp. 227.

It must be admitted that one is left without any very clear idea of what to do in school work after reading such paragraphs as these:

> No knowledge can be made our very own without this creative process, often called "assimilation" to the contents of the mind. Summarizing, reviewing, and abstracting is a practical and mechanical process of using the constructive imagination. Better still in the process of using our memory to the best advantage is thought, thinking things over that we have just learned; there can be no true education without the essentials of this process, for it means self-reliance, independence, even manhood and womanhood. Thought over a study-topic tends, by association, to go beyond the original limits of the assignment as learned; and this is pure imagination. Thus it becomes the basis of initiative, of ingenuity, and of originality, of all true creation.
>
> The *creation of diagrams and illustrations* is using the imagination to a great advantage; and the process is art in the making.
>
> The constructive imagination may be aided in fact and consciously and deliberately developed by many proper means. In childhood it may be developed by the reading or hearing of fairy stories; *Swiss Family Robinson*, and all such books; later on by the reading of books as *The Fairy Land of Science*, Thomson's *Wonder of Life*, histories of discoveries, Sir Oliver Lodge's presidential address on continuity, the novels of Jules Verne and H. G. Wells; by talking with fanciful and imaginative persons; and often by an active process of deliberate revery.
>
> Another mode by which the creative imagination may be developed is the enlargement of our vocabulary, our list of words and the habitual use of these idea-handles in writing. New terms lead to new associations. In general, as we shall see, the dictionary is not used nearly so much as it should be for easy learning; its disuse is largely due to muscular laziness, not to mental indifference [pp. 112–13].

One may venture to quarrel, too, with Professor Dearborn's title. Whoever starts on his educational career with the idea that learning is best done when it is most easily done has hardly read his psychology aright or realized fully the meaning of human experience. Learning is work and always will be. The business of the school is to systematize and organize work, not to evade it.

Three reports of educational surveys came to hand during September. One deals with the higher state institutions of Iowa. That state, like many another, has a complicated educational problem growing out of the fact that the agricultural college and the state institution for the training of teachers are geographically

separate from the state university. In the course of their development these higher state institutions have duplicated each other's work and have in some respects become unfriendly rivals. A few years ago the central Board of Education of the state of Iowa attempted to cure all the difficulties that had grown up within the state by arbitrarily redistributing all the functions of the various institutions. That effort failed because the allotment was not acceptable to the institutions themselves or to the people. Last year the Board carried on through a commission organized by the Commissioner of Education of the United States a survey[1] of the whole situation.

The report makes it clear that the actual duplication of work is, from the point of view of financial waste, a matter of very minor importance. On the other hand, there is an unwholesome rivalry in certain directions which is most unprofitable. Especially does it appear to be true that the state is badly organized in the matter of the training provided for teachers. Furthermore, the duplications in education courses are unfortunate, because the demand for training of teachers is so urgent that even if the facilities were well co-ordinated they would not be adequate.

Perhaps the purposes of this *Journal* will be best served by dwelling upon the attitude of the survey commission with reference to the teachers' college at Cedar Falls. This attitude can be set forth in the following quotations:

> With regard to the proposed discontinuance [beyond the second year of the professional work] of the work in liberal arts at Teachers College, Cedar Falls, the commission is disposed to urge the wisdom of this on several grounds. In the first place, it seems reasonably clear that the institutions at Ames and Iowa City are at present abundantly able to care for all students who may be expected to seek the Bachelor's degree in a state institution in Iowa. . . . . In the second place, the commission feels certain that at present, at least, the atmosphere of the institution is not unequivocally collegiate, and that students who now receive training there for the Bachelor's degree are likely to miss certain valuable elements in such training. . . . . In the third place, the amount of work now offered as of third- and fourth-year college grade is relatively small and may be regarded as only barely sufficient to round out a senior-college curriculum. . . . .

[1] *State Higher Educational Institutions of Iowa*, Bureau of Education Bulletin No. 19, 1916. Pp. 223.

Under these circumstances the commission feels that the expenditure of money and energy represented in keeping up the last two years of collegiate work at Cedar Falls is probably not to be justified on its merits. The commission would not be understood in this opinion as intending to depreciate in any way the seriousness of the work offered, nor the devotion and earnestness of the staff of instruction. The professional work done here is creditable to the state and to the authorities of the school, but a division of energy such as is suggested would in the long run contribute to the efficiency of the state institutions as a whole. . . . .

More particularly the commission would call attention to the desirability of greatly enlarging the facilities for practice teaching at Teachers College. . . . .

It [the survey commission] recommends, therefore, that the courses for elementary teachers, both rural and urban, be made three years in length, substantially one-third of the time to be devoted to professional subjects, and the rest to work dealing with the subject-matter of instruction. . . . .

If the board does not see fit to adopt these suggestions, however, and if the plans at present in operation be continued, then the commission would advise that the last two years of the work be very greatly strengthened to bring it more nearly into line with the curricula of first-class institutions conferring the Bachelor's degree.

Whether the suggestion made above be adopted or not, the commission is perfectly clear that there are today no agencies in Iowa adequate to furnish proper training to the number of teachers annually required in the schools of the state. This fact has evidently been recognized in the legislation providing for the addition of a year of normal training in certain high schools. The commission is fully cognizant of this situation, and its suggestion regarding Teachers College is therefore in no sense directed to any lessening of the resources of the state in this direction. There should be additional normal schools established, in parts of the state remote from Cedar Falls and probably preferably in the southwest and northwest divisions of the state. . . . .

In this connection attention should be called to the possibility of adding a group of strong men to the faculty of Teachers College (and to other normal schools, if established), who might give one-half of their time to instruction and the other half to service as members of the staff of the state superintendent of public instruction, supervising the work of the normal-training high schools. Such an arrangement would greatly enhance the solidity and efficiency of the normal training courses and would bring both the state superintendent's office and the normal schools into most helpful organic connection with these high schools. Any measure that will improve the supervision of the training of rural teachers and that will put at their disposal added opportunities for practice teaching ought to be energetically fostered [pp. 54–57].

The other two survey reports referred to must be treated briefly.

Professor Bobbitt has reported in Part II of the *School Survey of Denver*[1] on the work of the elementary schools. This document, like the earlier reports prepared by Dr. Bobbitt for South Bend, San Antonio, and Cleveland, is a vigorous plea for an enlargement and standardization of the elementary course.

If one looks for a typical passage, he finds it in the introduction to the chapter of the report which deals with history:

> History in the Denver schools is a seriously neglected subject. It is systematically taught in only the eighth grade. It finds a place on the program of the seventh grade in less than half of the schools of the city; and in these schools it receives a median amount of time of only thirty minutes a week. History is found on the program in the fourth, fifth, and sixth grades in less than half of the schools; and also in these schools it receives a median amount of but thirty minutes a week. Whereas in cities in general more than 6 per cent of the total elementary school recitation time is given to history, in Denver only a little more than 2 per cent of this total elementary time is given to the subject. Even in the one grade in which it is systematically taught, it is given a less proportion of the time than the average of cities in general for this grade. The large neglect of the subject in grades four, five, six, and seven is very unusual.
>
> Forty per cent of the children leave school before the eighth grade. This means that almost half of the citizens of Denver do not receive the necessary training for American citizenship that comes through at least one year's full systematic study of American history. Those who need this type of training most are those who come from homes that have not already the traditions of American citizenship and the general American outlook upon affairs. In other words, it is the children of immigrant families who are in greater need of American history than the children of native American stock. And yet it is these children of immigrant parentage who drop out of school in largest numbers before the eighth grade is reached. It is probable that a majority of immigrant children leave school without having had American history. This should receive immediate attention.
>
> "History teaching in elementary schools should make for good and efficient citizenship," says the course of study. The position is well taken. The greatest single task before American education today is efficient training for citizenship. Of the instruments for this training, none is more important than history. We recommend, therefore, that the subject be effectively used for the purpose and that the amount of time given to it in the fourth, fifth, sixth, and seventh grades be greatly increased [p. 77].

[1] *Report of the School Survey of Denver.* Part II, "The Work of the Schools; Elementary Schools," by Franklin Bobbitt; "High Schools," by Charles H. Judd. Denver: The School Survey Committee, 1916. Pp. 180.

In connection with a general survey[1] of the rural life of Lane County, Oregon, Professor Ayer has described in detail (Part IV) the school situation in the county and has discussed the reforms in organization which are urgently needed.

Before referring to the conclusions of the educational survey, it is appropriate to remark on the fact that the State University of Oregon has undertaken through its extension department a most important service in carrying on these school surveys. The federal Bureau of Education, state departments of education, and the departments of education in state universities would seem to be the natural authorities to which communities ought to turn when they are in need of that general supervisory assistance which a survey affords.

Mr. Ayer's general conclusions can be summarized in his concluding paragraph as follows:

> Careful reading of the foregoing pages will disclose the fact that there are many phases of education and numerous individual schools in Lane County which receive commendation and which are worthy of imitation elsewhere. Judging from the standards which have been set elsewhere, rural education may be said to be above the average. But average rural education in the United States is far from satisfactory. Most certainly it will not answer in Lane County, where the promotion of rural life and efficiency is of first importance to the ultimate welfare of the entire population. Little space has been given to pointing out local defects which may be remedied over night, for the trouble is deep-seated, and one which demands rigorous treatment, no less than the complete reorganization of county educational administration.
>
> It will take time to attain the ideals here set forth, but because the journey may prove long is no reason for delaying the start. If rural education in Lane County is to meet the needs of country life in an adequate manner, definite progress should be made at an early date toward the following changes: (1) development of consolidated grade schools and union high schools at points which, geographically and economically, are "natural" community centers; (2) adoption of the county unit system in place of the present one-sided system of county educational administration; (3) extension of the present rural supervisory system; (4) equalization of the burdens of taxation for school purposes by increasing the proportional amounts borne by the state and county, and lowering the proportional amount borne by local school districts; (5) distribution of authority among state, county, and district school officials

[1] *A Rural Survey of Lane County, Oregon.* By Fred C. Ayer and Herman N. Morse. Published by the Extension Division, University of Oregon, 1916. Pp. 109.

in such a manner as (*a*) to adjust the course of study to local needs, (*b*) to stimulate local school support, and (*c*) to insure equal educational opportunities in all parts of the county [pp. 108–9].

A recent bulletin on *The Content of American History as Taught in the Seventh and Eighth Grades*, by Drs. W. C. Bagley and H. O. Rugg,[1] gives the present status of history instruction in these grades, as shown by the content of twenty-three elementary textbooks. The study of textbooks was undertaken as a part of the effort to find criteria and methods for designing the "minimal essentials" of the elementary curriculum which was initiated by the Committee on Economy of Time of the National Education Association in 1912. The writers start from the following fundamental assumptions: first, history instruction is of major importance in forming lasting attitudes toward, and ideals concerning, national issues; secondly, there is need for a "core" of material in the subjects of the elementary grades which will include the facts and principles that form part of the culture common to all the people; thirdly, the determination of the ideal content of the course of historical instruction will be facilitated by ascertaining with exactness present prevalent practice; fourthly, textbooks form the basis of instruction in history and should be scientifically studied to find these common facts and principles.

The material in twenty-three histories published for use in the seventh and eighth grades is classified by typical periods with the aim of establishing the present content of historical instruction and significant changes that this content has undergone in the past half-century of textbook writing. The relative importance of each type of fact is measured by the proportion of space (i.e., the percentage of words) denoted to that topic in each textbook. Results are shown by detailed tabulations which give the percentage of each book devoted to each topic occurring in as many as half of the books, and the relative frequency of mention of various persons grouped by "publication periods." The interpretive comment running throughout the monograph summarizes for the reader the

[1] *University of Illinois, School of Education, Bulletin No. 16*, Urbana, Ill., 1916.

essential characteristics of present historical content and points out the striking developments of the past fifty years. It emphasizes the present predominance of political and military materials, but points out their declining importance and the increasing emphasis on social, economic, and industrial developments. It indicates the kinds of pedagogical helps that more recent historical instruction is demanding and receiving, namely, improvements in style, increased use of the "problem," more frequent use of pictures, maps, anecdotes, etc. It contributes to our knowledge of present "standardized" content of history instruction by definitely establishing the distinct "core" of common topics running throughout our American histories.

This study represents the type of foundational work that must be done on the content side of the elementary subjects before any thoroughgoing experimental attack can be made in the direction of improving methods of instruction. The facts presented should be of definite service to persons working on the problems of design in history courses. The study will doubtless be criticized because of the methods of selection of textbooks, which the writers speak of as "random." To determine the actual content of history instruction at the present time books should be selected with reference to their "frequency of use." Whether any significant differences in common materials would be found in a different selection of texts should be ascertained before any detailed use is made of the facts standardized by this bulletin.

The rapid organization of special classes for backward children has created a demand for special material to be used in teaching the children of such classes. It is very evident to all students of the problem that the conventional school material will not serve. Even if defectives are to learn to read—and it is altogether certain that too much reading has been attempted with some of them—the approach to the reading-lesson with them must be very different from the ordinary approach. We shall, therefore, find in increasing measure contributions to the educational material designed to meet the needs of teachers of defectives.

Miss Hilda A. Wrightson has prepared a volume[1] which is characterized in the introduction by Dr. Goddard by the following statements:

> Miss Wrightson has brought together in convenient form a large number of games especially adapted to accomplish these results. . . . .
>
> The teacher unfamiliar with feeble minds will perhaps think some of the games here described of no value. It is always hard for the more intelligent to understand the less intelligent, for normal teachers to understand defective children. It should be remembered that the joy of accomplishment is one of the greatest joys of life for all grades of intelligence. It is the fact that the list includes games adapted to the simplest minds which constitutes one of its excellences.
>
> It should not be forgotten that these games not only develop co-ordination and attention; manners, morals, self-control, altruism, patience, and many more desirable qualities are involved. What more can education do than develop to the limit of the individual's capacity these qualities which, possessed even in a small degree, will help to make him a social rather than an anti-social being?

[1] *Games and Exercises for Mental Defectives.* By Hilda A. Wrightson. Cambridge, Mass.: Caustic-Claflin Co., 1916. Pp. 100.

THE INTERMEDIATE GRADES AND DEPARTMENTALIZATION. II

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PART II

SECTION V. DEPARTMENTAL ORGANIZATION OF THE INTERMEDIATE GRADES

The fight over the merits of the departmentalization of the seventh and eighth grades is almost a thing of the past. Its introduction experimentally in a large number of the schools of New York City, beginning about 1900, gave the device a popularity which has led to its application rather extensively over the country. In 1913, the United State Bureau of Education sent a questionnaire[1] on departmental teaching in the grades to all cities having a population of 5,000 or over. Of 813 replies received, 461 showed some form of departmentalization in the grades, though very few cities reported this plan in operation below the seventh grade.

Fifteen years ago there was vigorous opposition to departmental work in the seventh and eighth grades, and many plausible arguments were made against it. It was claimed that the teachers would become narrow; the children would be overworked, would have no personal supervision; the program could not be arranged in accordance with the so-called laws of fatigue; disorderly conduct would be encouraged; correlation of subjects would be almost impossible. Experience has shown that if properly organized and safeguarded, departmental teaching in the seventh and eighth grades is not seriously open to criticism on any of the above-mentioned grounds.

Possibly because the departmental organization was extensively and successfully applied only in the seventh and eighth grades in

[1] *City School Circular No. 20*, July 14, 1913.

New York City, and later only in these grades in numerous other cities, there is little vigorous opposition to it among schoolmen when it is confined to the seventh and eighth grades, but the proposition of departmentalizing the intermediate grades is not approved. The old stock arguments, so unsuccessfully used a decade ago against its introduction in the grammar grades, are again brought forward. It is further agreed that the work of the intermediate grades is largely to prepare the children for the grammar grades, that this work is well done, and that we should "let well enough alone"; the intermediate children need mothering more than expert teaching; these grades are not confronted with serious problems as are the grammar grades; young children would be confused by the number of teachers and the frequent shifting from one room to another; there are other problems much more important and more worthy of study and experimentation—for example, the junior high-school problem.

If departmental teaching stimulates the pupils of the seventh and eighth grades to greater effort, develops initiative, results in better teaching, greater interest, less repetition, less waste of time, makes possible the expansion and enrichment of the course of study, why will not these same ends be secured by departmentalizing the sixth grade, the fifth grade, or the fourth grade? Where is the point in the grades, if there is such a point, where the disadvantages outweigh the advantages? Are there fundamental reasons why the seventh grade is the lowest limit of worth-while departmentalization, or is this limitation based merely on inertia or submission to precedent?

If, as previously claimed in this paper, the intermediate grades are confronted with fundamental problems, and have an important work to accomplish, aside from preparing children for the grammar grades, then the foregoing questions are worth considering carefully. If the junior high-school movement is to succeed, the problem of the intermediate grades must be understood and a reorganization made which will result in more thorough teaching, a more purposeful course of study, and greater effort, initiative, and independence of thought from the children of these grades.

SECTION VI. THE DEPARTMENTAL ORGANIZATION OF THE INTERMEDIATE GRADES OF MADISON, INDIANA

In January, 1912, after a careful consideration of the merits and demerits of departmental organization of the intermediate grades, the writer organized the 6B, 5A, and 5B grades of the Madison, Indiana, public schools departmentally, and in September, 1912, extended this plan to the 4A and 4B grades. Grades 6A, 7B, 7A, 8B, and 8A were departmentalized in 1908 by Dr. W. A. Jessup, then superintendent at Madison; hence since September, 1912, every grade above the third has been operated on this basis.

Madison is a city of between seven and eight thousand inhabitants, with a school enrolment of about 1,300, which has not materially varied from this number for at least seven years. The school population is almost entirely American born, there being but three foreign-born children in school at the present time. There is a negro enrolment of about one hundred, for whom a separate school is maintained. The white children are divided between two schools until the middle of the sixth grade is reached, then they are sent to a grammar school for the work of Grades 6A, 7, and 8.

The semester enrolment for the last five years is shown in Table III.

TABLE III

Semester	Grade					Total
	4B	4A	5B	5A	6B	
First, 1911–12	75	69	62	42	52	300
Second, 1911–12	68	73	70	52	43	306
First, 1912–13	75	67	71	58	46	317
Second, 1912–13	67	68	65	58	53	311
First, 1913–14	49	58	70	53	48	278
Second, 1913–14	53	46	62	59	50	270
First, 1914–15	63	47	47	52	54	263
Second, 1914–15	73	55	51	41	48	268
First, 1915–16	70	62	64	41	36	273
Second, 1915–16	56	64	59	59	41	279
Average enrolment	64.9	60.9	62.1	51.5	47.1	286.5

The intermediate departmental teaching has been done by ten teachers in groups of five each. Following are the schedules of all teachers in one of the intermediate departments:

DAILY PROGRAM, INTERMEDIATE DEPARTMENT

TEACHER OF LANGUAGE, SPONSOR FOR 4B GRADE

8:45– 9:00	Opening exercises, 4B grade
9:00– 9:30	Language recitation, 5A
9:30– 9:45	Supervise language-study, 4A
9:45–10:15	Language recitation, 6B
10:15–10:30	Supervise language-study, 5B
10:30–10:45	Recess
10:45–11:15	Language recitation, 4A
11:15–11:30	Supervise language-study, 4B
11:30–11:40	Spelling, 4B
	Noon Intermission
1:15– 1:45	Language recitation, 5B
1:45– 2:00	Supervise language-study, 5A and 6B
2:00– 2:30	Language recitation, 4B
2:30– 2:45	Recess
2:45– 3:05	Music, 4B
3:05– 3:20	Writing, 4B
3:20– 3:40	Drawing, 4B

11:15–11:40	Monday, Supervisor of drawing, 4B
11:15–11:45	Tuesday, Supervisor of sewing, 4B (girls) Tuesday, Manual work, 4B (Boys)
2:45– 3:05	Monday, Supervisor of music, 4B

TEACHER OF READING, SPONSOR FOR 4A GRADE

8:45– 9:00	Opening exercises, 4A
9:00– 9:30	Reading recitation, 6B
9:30– 9:45	Supervise reading-study, 5B
9:45–10:15	Reading recitation, 4A
10:15–10:30	Supervise reading-study, 6B and 5A
10:30–10:45	Recess
10:45–11:15	Reading recitation, 4B
11:15–11:30	Supervise reading-study, 4A
11:30–11:40	Writing, 4A
	Noon Intermission
1:15– 1:45	Reading recitation, 5A
1:45– 2:00	Supervise reading-study, 4B

2:00– 2:30 Reading recitation, 5B
2:30– 2:45 Recess
2:45– 3:10 Spelling recitation, 4A
3:10– 3:40 Music two days, drawing two days, 4A

11:15–11:40 Monday, Supervisor of music, 4A
Wednesday, Supervisor of drawing, 4A
11:05–11:40 Tuesday, Supervisor of sewing, 4A (girls)
Tuesday, Manual work, 4A (boys)

TEACHER OF GEOGRAPHY, SPONSOR FOR 5B GRADE

8:45– 9:00 Opening exercises and miscellaneous work, 5B
9:00– 9:30 Geography recitation, 4B
9:30– 9:45 Supervise geography-study, 5A and 6B
9:45–10:15 Geography recitation, 5A
10:15–10:30 Supervise geography-study, 4B
10:30–10:45 Recess
10:45–11:15 Geography recitation, 5B
11:15–11:30 Supervise geography-study, 5B
11:30–11:45 Writing, 5B

Noon Intermission

1:15– 1:45 Geography recitation, 4A
1:45– 2:00 Supervise geography-study, 4A
2:00– 2:30 Geography recitation, 6B
2:30– 2:45 Recess
2:45– 3:00 Spelling recitation, 5B
3:00– 3:25 Music or drawing, 5B
3:25– 3:35 Spelling recitation, 5A
3:35– 3:50 Physiology recitation, 5B and 5A

3:00– 3:50 Tuesday, Manual training, 5B (boys)
Tuesday, Supervisor of sewing, 5B (girls)

TEACHER OF ARITHMETIC, SPONSOR FOR 5A AND 6B GRADES

8:45– 9:00 Opening exercises, 5A and 6B
9:00– 9:30 Arithmetic recitation, 4A
9:30– 9:45 Supervise arithmetic-study, 4B
9:45–10:15 Arithmetic recitation, 5B
10:15–10:30 Supervise arithmetic-study, 4A
10:30–10:45 Recess
10:45–11:15 Arithmetic recitation, 6B
11:15–11:30 Supervise arithmetic-study, 5A and 6B
11:30–11:45 Writing, 5A and 6B

Noon Intermission

1:15– 1:45 Arithmetic recitation, 4B
1:45– 2:00 Supervise arithmetic-study, 5B
2:00– 2:30 Supervise arithmetic-study, 5A
2:30– 2:45 Recess
2:45– 3:00 Supervise spelling-study, 5A and 6B
3:00– 3:12 Spelling recitation, 5A
3:12– 3:25 Spelling recitation, 6B
3:25– 3:50 Music or drawing, 5A and 6B

3:00– 3:50 { Tuesday, Manual training for boys, 5A and 6B
Tuesday, Supervisor of sewing for girls, 5A and 6B

TEACHER OF HISTORY, SUPERVISING PRINCIPAL

9:00– 9:30 History recitation, 5B
9:45–10:15 History recitation, 4B
10:45–11:15 History recitation, 5A
1:15– 1:45 History recitation, 6B
2:00– 2:30 History recitation, 4A
(Free time is devoted to supervision and other duties of Principal.)

Each teacher is sponsor for one group of pupils. They have their home seats in her room, have their opening exercises there, study and recite such subjects as spelling and writing under her supervision, are accountable to her for tardiness and absence, have class plays and entertainments under her charge. That the children have a feeling of direct responsibility to and interest in their home-room teacher is indicated by the answers to numerous apparently casual inquiries made of children in the intermediate department. There is no indication that the children have the feeling that they do not belong anywhere, or that there is no one particularly interested in their welfare.

Each child has daily recitations with five teachers in the following subjects: reading, arithmetic, language, geography, and history. He goes to the geography room to recite geography, the reading-room to recite reading, and likewise in the remaining subjects. The justification of this procedure is to provide frequent and needed physical relaxation, to avoid constant shifting of maps, books, and other equipment from one room to another, and to permit each teacher to plan her seat and board work with the least confusion

and waste of effort. The study-periods for each subject are supervised by the teacher of that subject, in order that she may be able to give individual help and encouragement to those found in need of it during the recitation period. All study-periods are in the children's home study-rooms, where they can have access to their dictionaries, texts, and school supplies.

As the purpose of the first three grades is largely a preparation for the work of the intermediate grades, each intermediate teacher virtually introduces each child to her special subject and has entire charge of the development of that subject for a two-and-a-half-year period. This not only fixes the entire responsibility on her for the acquirements of each child in her subject, but also gives her an opportunity thoroughly to understand the weaknesses, failures, idiosyncrasies, strong points, and needs of each child.

The five teachers of each departmental group hold frequent conferences which are of great benefit not only in securing a satisfactory correlation of subjects, but in solving problems of discipline and in obtaining a better understanding of needs, aptitudes, and home conditions of the children.

As far as possible, the interests and aptitudes of the teachers were considered in assigning the main subjects to be taught, and the plan was freely and critically discussed with each teacher before departmentalization was instituted.

SECTION VII. REPORT OF DEPARTMENTAL TEACHERS

In the spring of 1916, a questionnaire on departmental teaching was sent to the ten intermediate departmental teachers of Madison. In order to secure frank answers, it was requested that the questions be answered without consultation, the desire for frank answers was emphasized, and there was no space for signatures on the blanks. Following are the questions and typical answers.

1. What are your objections, if any, to the departmental plan?

The prevailing answer was "None." Two teachers objected to their inability to alter the program for the purpose of securing more time for difficult lessons. A third teacher made the following answer: "None for the children's sake. In some subjects, the teacher's field is narrow."

2. In what respects is it better than the old plan of organization?

Following is a summary of the answers in order of frequency:

a) Teachers do better work, 9.

b) Pupils are benefited by contact with several personalities, 4.

c) Work can be better organized when covering a two-and-a-half-year period, 3.

d) The moving from room to room aids discipline, 3.

e) More time for individual work with children, 2.

f) Permits longer recitation periods, 2.

g) Pupils are thrown on their own resources more than under the old plan, 1.

h) Prevents the confusion and loss of time incident to a semi-annual change of children, 1.

i) The children make more progress, 1.

j) The children cover more ground in the departmental subjects, 1.

k) Gives the teacher a better knowledge of the ability of each pupil, which enables her to work for the pupils' best interests more intelligently, 1.

l) Work can be more thoroughly studied and recitations more carefully planned and outlined, 1.

m) Teacher has opportunity to specialize, 1.

n) Makes supervised study-periods possible, 1.

3. What, if any, effect has this plan had on the number of failures?

Ten report fewer failures.

4. How do the children progress under the system, compared with the other plan?

a) Children do more work, 6.

b) There has been improvement in ability to study, 4.

c) Better discipline, 3.

d) More independent thinking by the pupils, 1.

e) More initiative shown by pupils, 1.

f) Self-control is better developed, 1.

g) Work is more thorough, 1.

5. Do you feel that you can do better and more effective teaching under the old plan than under the new? State reasons.

Ten answered "No."

Summary of reasons:

"I can concentrate on one subject and thus do more effective work."

"I know exactly the work a class has covered and can anticipate the work to be done."

"I can plan and see the work in my subject as a whole and can better adapt it to the children's needs."

"Having children for several years gives me a better opportunity to correct their deficiencies."

"Under the old plan, the recitations were too short and there were too many subjects to prepare."

"Work is better organized and better taught."

"I am better acquainted with the children."

"Because of the fewer subjects, aims and methods are better comprehended. More time to think of the children and their problems."

"Children seem more interested."

6. In your subject, how are the pupils doing compared with pupils of the same grade under the old plan?

All report better work.

7. How do the children like this plan?

Summary of answers:

"They like to pass from room to room and from teacher to teacher."

"There are fewer antagonisms between teacher and pupils."

"The children like this plan very much."

"The children like this plan because there is more activity connected with it."

8. Does it, or does it not, seem to be adapted to better meet their needs? Explain.

Summary of answers:

"It is better adapted to their needs."

"It gives the opportunity to both pupil and teacher to spend more time and energy on points which present special difficulty."

"Children get more individual attention and receive more efficient help in learning to study."

"Pupils are better understood and their abilities appreciated."

SECTION VIII. RESULTS OF DEPARTMENTAL TEACHING IN INTERMEDIATE GRADES

The following statement of the results of the departmental organization of the intermediate grades is based on careful observations made by the writer, on the opinions of departmental teachers, and on interviews with children of these grades.

1. The great reduction in the number of subjects to be taught by any one teacher and the consequent simplification of the program has enabled intermediate teachers to become specialists in the same sense that primary teachers and junior high-school teachers are specialists. The result has been a decided improvement in the teaching, in the organization of material, and in the methods of study of every departmental subject.

2. Each teacher is keenly aware of the daily comparison with the other four departmental teachers made by the children and is stimulated thereby to keep her work and discipline up to a high standard.

3. A two-and-a-half-year contact with each child and the entire responsibility for the work in a given subject for the same period is of immense benefit. It secures a better understanding of the character, disposition, ability, and home conditions of the children by the teacher, a better understanding of the character, ideals, and purposes of the teacher by the children. It prevents waste of time due to readjustments, lack of understanding, needless repetition of work, unnecessary reviews, and lack of knowledge of quality and amount of work covered in previous semesters. It definitely fixes the responsibility both for poor and for good work in a given subject. Under the conventional plan, the average city child enters a new room under a new teacher about every five months. If he is poorly taught, his teacher can with easy conscience ascribe his lack of progress to the poor teaching in the previous room. The duties of such a teacher are so numerous and the time allotted is so short that a teacher is fortunate if she has caught a clear vision of the needs and abilities of the individuals in her class before they are hurried on and thirty or forty new unknowns are brought in to replace the old. Public attention has not been sufficiently attracted to the waste due to short-lived contact between pupils and teacher and to the complexities of the grade teacher's program.

4. Supervised study-periods are made possible, which enables teachers to give individual help where it is needed and to prevent the formation of bad study-habits. We hear frequently of the need of supervised study in the high school, but if study were properly instituted and directed in the grades, there would be no such high-school problem.

5. The teachers are better pleased with their work and have a better understanding of their problems.

6. This plan makes possible the introduction of vocational work without disrupting the program or wasting the time of regular teachers.

7. The comparative immaturity of third-grade children and the small number of subjects to be taught make departmentalization of that grade unnecessary and inadvisable. Children of the fourth grade are able to work efficiently with departmental teachers. A further advantage of including the fourth grade is that the teacher

of history, for example, can justly be held responsible for the historical attainments of all pupils completing the intermediate grades. For these reasons and because of the notable expansion of the course of study at this point, and because here first noticeably appears the beginning of what the writer believes to be a distinct period of mental development, departmental work was started in the fourth grade.

8. The moving of the classes from room to room breaks up the usual schoolroom monotony and affords a frequent normal outlet for physical energy.

TABLE IV

	4B	4A	5B	5A	6B	Total
Year previous to complete de-departmentalization, 1911–12	11	14	18	10	8	61
First year of departmentalization, 1912–13	17	19	17	9	3	65
Second year, 1913–14	10	7	17	8	12	54
Third year, 1914–15	14	1	7	0	1	23
Fourth year, 1915–16	12	12	12	9	5	50

9. Among five teachers, every child is likely to find at least one who understands him, and, because of the frequent conferences among the teachers, is likely to be better appreciated and understood by all of his teachers. It is a fact that under the one-teacher plan children often withdraw because of lack of interest in, or because of dislike for, the teacher in charge of them. The bad effect of an unsympathetic or incapable teacher is minimized by the departmental plan.

10. Under this plan, the course of study has a greater content value, and is more logically and thoroughly developed. In any given subject the work is carried on for several years without change of purpose or shifting of emphasis.

11. There has been a decrease in the number of failures. This is indicated by the replies of the teachers shown above and by the statement of semester failures in these grades for the last five years given in Table IV. This table shows an increase of failures

during the first year of complete departmentalization and a decrease of from 10 to 60 per cent in the three succeeding years.

12. The plan seems suited to the needs and capabilities of intermediate-grade children.

13. It offers a partial solution of the problem which must be solved before the junior high school can be justified, namely, the making of the work of the first six grades sufficiently extensive and purposeful to cover the worth-while material of the present eight-year course.

In organizing the intermediate grades departmentally, the following rules should be observed if the best results are to be obtained:

1. Every child should have a home room and a teacher in charge to whom he is directly responsible.

2. There should not be over one hundred and fifty pupils in a departmental group.

3. There should not be more than six teachers nor less than three in each department.

4. A pupil should have the same teacher for at least a two-year period.

5. The teachers should have a thorough knowledge of the possible benefits and defects of the plan, and should be willing to give departmentalization a fair trial, before the reorganization is attempted.

6. Frequent conferences of departmental teachers should be held.

7. The method of supervising study-periods should be carefully worked out.

8. As far as possible, subjects should be assigned to teachers in accordance with their interests and aptitudes.

9. The children should go to the various recitation rooms for recitations instead of the teachers being shifted.

HOUSEHOLD MANUFACTURES IN THE UNITED STATES: A QUARTER-CENTURY OF DEVELOPMENTS 1784–1809. I[1]

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Between 1784 and 1810, household manufactures passed through the three following important stages: (1) a sudden decline of interest in, and devotion to, them; (2) a quick recovery of this interest and devotion; and (3) the stage in which they became the dominant factor in the struggle for economic independence. The first few years next following the Treaty of Paris saw a sudden decline in the interest of the people in goods of their own fabrication. However, as soon as they realized the full effects of their "madness for foreign finery," they returned to their former simplicity and economy in life's necessities. This return is evidenced by the extent to which commodities of all sorts were made in the homes and on the plantations about 1790. As a result of their experience during the hard times following the establishment of their political independence, the people began to see the need of economic independence as well. To establish this much-desired condition great reliance was placed on the system of household manufacturing. In fact, prior to the economic changes brought about by the chain of events which culminated in the War of 1812, this system was the dominant factor in an earnest struggle for economic freedom; for, without factories and mills sufficient to supply their needs, the inhabitants of this newly born nation were forced to rely mainly upon the home and the small shops for many of their manufactured necessities. This was especially true of the southern and western sections of the country during the twenty-five years prior to 1810.

[1] [This article is chap. iv of a forthcoming work by the writer on the *History of Household Manufactures in the United States, 1640–1860*. The type of historical material here presented illustrates the trend of modern historical studies toward a consideration of economic and social facts rather than toward a treatment of political occurrences as the sole content of history.—EDITOR.]

A SUDDEN DECLINE AND A QUICK RECOVERY

Even before the Treaty of Paris was signed, foreign manufactured commodities began to flood the country. During the year ending at Christmas, 1783, wares were imported from England to the official value of £1,435,407. The same value in pounds for 1784 was 3,697,467; for 1785, 2,308,023; and for 1786, 1,603,466. Not until 1791 did the imports again equal those of 1784.[1] Since these values were official, they were considerably less than the real values which Pitkin estimated for the years 1784 and 1785 at $30,000,000.[2] The sudden drop in 1786 is significant. The people had bought beyond their means. Such a vast influx of goods soon took from them a large amount of the specie which they had when the war closed. Hard times followed, with the result that there was a considerable decline in the amount of English as well as other foreign goods consumed.

The influx of this large quantity of foreign supplies had a direct effect on household manufactures. The women gave up their wheels and looms, and foreign fabrics took the place of those made in the homes. In the sections of the country where commercial communication made it possible to acquire such luxuries, the whole domestic life was entirely changed. Speaking of this matter in his message to the legislature in February, 1786, Governor Bowdoin of Massachusetts said: "The quantity of woolens imported, their superior fabric, and the cheapness of them, have not only in a great measure put a stop to our looms, and to the several other modes of manufacturing our wool, but have thereby been a principal cause of the decrease of sheep in this Commonwealth."[3] The governor asked the assembly to remedy these conditions. This body, however, must have felt that conditions would adjust themselves without legislative interference, since no action was taken regarding the governor's request.

Massachusetts was not alone in this superabundant supply of foreign manufactures. Similar situations existed in other parts of the country. In addressing an assembly of the friends of American

[1] Macpherson, *Annals of Commerce*, IV, 40, 68, 99, 120, 231.

[2] *Statistical View of the Commerce of the United States* (ed. 1816), p. 30.

[3] *Acts and Laws of the Commonwealth of Massachusetts* (1784–85), p. 840.

manufactures, in Philadelphia on August 9, 1787, Tench Coxe, in speaking of the use and plentifulness of foreign goods, said:

> An extravagant and wasteful use of foreign manufactures has been too just a charge against the people of America, since the close of the war. They have been so cheap, so plentiful, and so easily obtained on credit, that the consumption of them has been absolutely wanton. To such an excess has it been carried, that importations of the finer kinds of coat, vest, and sleeve buttons, buckles, brooches, breast-pins, and other trinkets into this colony [Pennsylvania], is supposed to have amounted in a single year to ten thousand pounds sterling, which cost wearers above 60,000 dollars. . . . .[1]

While Coxe felt that it was only "in the towns that the madness for foreign finery raged and destroyed," yet, according to the testimony of a farmer living near Philadelphia, the people living in rural districts too had given up their home-made stuffs for the foreign finery. This farmer illustrated the cause of the hard times that were then upon them by citing the change in the "setting out" given each of his three daughters. In 1780, when the first daughter married, she was permitted to take the best wool and flax and make for herself gowns, coats, stockings, and shifts. She was also allowed to buy some cotton and make it into sheets. Two years afterward his second daughter married. For her "setting out" the mother went to town and purchased a calico gown, a calamanco petticoat, a set of stone teacups, a half-dozen pewter teaspoons, and a teakettle—things that had never entered this farmer's house before. Three years later the third daughter married. She had to have a silken gown, silk for a cloak, a looking-glass, china, tea-gear, and other finery.[2]

The change that took place in this farmer's household is representative of what happened between 1780 and 1786 in many sections of the country. In this particular case the mother simply wished to have the "settings out" of her daughters equal to those of other girls in the community. Up to 1780 this farmer had never spent more than ten dollars a year for clothing and household supplies. Nothing to eat, drink, or wear was purchased, as his farm provided all of these necessities. It was his belief that the hard times, of which so many complained in 1787, were caused by

[1] *A View of the United States of America*, pp. 49 f.

[2] Carey, *American Museum*, I, 11.

the drifting away of the people from their mode of living in 1780. The wheel and loom had come to be used only for the purpose of exchanging the substantial cloth of flax and wool for gauze, ribbon, silk, tea, and sugar, instead of providing textile fabrics for the family's own use.[1]

The "unextinguishable rage for foreign finery" even invaded the valley of Virginia. In speaking of imports into this section on the close of the war Kercheval said:

> Immense quantities of British and French goods were soon imported; our people imbibed a taste for foreign fashions and luxury; and in the course of two or three years, from the close of the war, such an entire change had taken place in the habits and manners of our inhabitants, that it almost appeared as if we had suddenly become a different nation. The staid and sober habits of our ancestors, with their plain home-manufactured clothing, were suddenly laid aside, and European goods of fine quality adopted in their stead.[2]

The Quakers then living in the valley were not included in the term "our ancestors." They still continued their ancient custom of depending upon household manufactures for their clothing.[3]

Special efforts were made in some states to call the people back to their former primitive custom of manufacturing their own clothing and household textiles. In March, 1786, the General Assembly of Rhode Island passed an act for encouraging the growth of hemp and flax within the state. The Assembly took this action because of the great importance to the state of encouraging the growth of all raw materials, more especially, as the preamble claimed, of those that supplied clothing to the inhabitants. One penny a pound was offered for every pound of good merchantable hemp or flax raised in the state during the years 1786 and 1787. At the same session a measure was enacted to encourage the growth of sheep in the state.[4] Connecticut in the same year provided that there should be deducted from the sum of the total lists of all owners of sheep an amount equal to four shillings a head for all sheep owned. By the same act, sheep up to the number of twenty

[1] Carey, *American Musum*, I, 12.

[2] *History of the Valley of Virginia* (1st ed., 1833), pp. 199 f.

[3] *Ibid.*, p. 202.

[4] *Rhode Island Col. Rec.*, X, 180, 182.

were exempted from executions.[1] Governor Livingston of New Jersey, an ardent advocate of homespun, communicated his views on the subject to the public through the pages of the *American Museum*. In an article published in July, 1791, he made a strong plea to induce the people to stand firmly by their homespun and leave off the European finery. He said in part:

> By what strange fatality, by what unaccountable, fortuitous concourse of atoms, has our *homespun* gone out of fashion, in a country that ought to glory in it; and in which its perpetuity annually would have saved thousands of pounds? O, how I have delighted to behold, in the county of Bergen, piles of this home-wrought woollen, not only for the dress of my male copatriots, but for the future investment of the delicate limbs of my fair country women. . . . . This laudable economy was not peculiar to Bergen. It is not long since that the manufacture of our own cloth was very general among the farmers. Why is this practice so generally discontinued at present? Must we necessarily determine upon a domestic, because we have acquired a political, revolution? And the former as ruinous as the latter is, or may be made, advantageous?

The governor attributed the decline of home manufacturing to what he termed "the unextinguishable rage for foreign finery." He felt that the people had simply gone mad over the fashions of Paris and London. His plea to them to return to their homespun was as follows:

> To your homespun, my fellow citizens. Have the patriotism to disappoint both Gaul and Albion in their arts to drain your every copper for their trifles and baubles. Disappoint both of them in their contest who shall make most of you; and which of them shall soonest ruin you. To your homespun, I say. And in order to facilitate its fabric, I would advise our farmers to desist from their present practice of selling their best lambs to the butcher; and at the same time urge the utility of exchanging their rams with some distant farmer, every year.[2]

Influenced partly by such pleas as this one of Governor Livingston and the one cited below of the citizen of Massachusetts, but more by the lack of means to supply themselves with foreign goods, many of those who had gone off after the "foreign finery" returned to their homespun before 1790. The spinning-bees of 1768 were

[1] *Acts and Laws of Connecticut* (1786), p. 345.

[2] "Homespun," *American Museum*, X, 17 f. For a similar plea made to the citizens of Massachusetts see extracts from an essay entitled "National Arithmetic or Observations on the Finance of the Commonwealth of Massachusetts," *ibid.*, V, 358. This was written in 1789.

revived and again became the rage in New England. Sometimes more than a hundred married and single ladies would attend one of these bees, which was usually held at the minister's house. On account of both their social and their economic importance, a full account of one held in Falmouth (now Portland), Maine, on May Day, 1788, follows:

> On the 1st instant, assembled at the house of Rev. Samuel Deane, of this town, more than one hundred of the fair sex, married and single ladies, most of whom were skilled in the important art of spinning. An emulous industry was never more apparent than in this beautiful assembly. The majority of fair hands gave motion to not less than sixty wheels. Many were occupied in preparing the materials, besides those who attended to the entertainment of the rest—provisions for which was mostly presented by the guests themselves, or sent in by other generous promoters of the exhibition, as were also the materials for the work. Near the close of the day Mrs. Deane was presented by the company with two hundred and thirty-six seven knotted skeins of excellent cotton and linen yarn, the work of the day, excepting about a dozen skeins which some of the company brought in ready spun. Some had spun six and many not less than five skeins apiece.[1]

The effect of the social movement represented by the spinning-bees and the general agitation for economy and frugality throughout the country about 1790 can be seen in the actual output of the home factory at this time. Fortunately some rather definite data were collected on household manufactures about the time the first census was taken. These data are very significant and worth presenting in considerable detail. The following section is devoted to such a presentation.

A CROSS-SECTION VIEW ABOUT 1790

Two of the best-informed men on the general economic state of the country in 1790 were Tench Coxe and Alexander Hamilton. In speaking of household manufactures at this date, Coxe said:

> The progress and present state of the invaluable branch of the national industry, exceeds every idea of it, it is believed, that has been formed of it,

[1] *Cumberland Gazette*, May 8, 1788; quoted by Kittredge in *The Old Farmer and His Almanack*, pp. 18 f. Smith, in his *History of Pittsfield, Massachusetts* (1800–1876), pp. 53 f., quotes from the *Pittsfield Chronicle* accounts of bees held in July and October, 1788, similar to the one above. Forty-five young ladies were present at the first bee reported, and twenty-four married women at the second. Fifty-five runs of yarn were spun at the former and twenty-six at the latter.

either in this country or in Europe. In all the states inhabited almost entirely by white people, domestic manufactures are known to be considerable, yielding a considerable surplus for use of other parts of the union.[1]

Hamilton, in his famous report on manufactures in 1791, after enumerating seventeen of the most considerable articles of manufactories, concluded thus:

> Besides manufactories of these articles, which are carried on as regular trades, and have attained to a considerable degree of maturity, there is a vast scene of household manufacturing which contributes more largely to the supply of the community than could be imagined, without having made it an object of particular inquiry. This observation is the pleasing result of the investigation to which the subject of this report has led, and is applicable as well to the Southern as to the Middle and Northern States. Great quantities of coarse cloths, coatings, serges, and flannels, linsey woolseys, hosiery of wool, cotton, and thread, coarse fustians, jeans, and muslins, checked and stripe cotton and linen goods, bed ticks, coverlets, and counterpanes, tow linens, coarse shirtings, sheetings, toweling, and table linen, and various mixtures of wool and cotton, and of cotton and flax, are made in the household way, and, in many instances, to an extent not only sufficient for the supply of the families in which they are made, but for sale, and, even, in some cases, for exportation. It is computed in a number of districts that two-thirds, three-fourths, and even four-fifths, of all the clothing of the inhabitants, are made by themselves. The importance of so great a progress as appears to have been made in family manufactures, within a few years, both in a moral and political view, renders the fact highly interesting.[2]

These generalizations were based upon letters and statements sent to Hamilton and Coxe when they were collecting data for the report mentioned above. While no house-to-house canvass was made by those who sent in the accounts, yet, judging from their character, they must have been made by well-informed individuals. Since they are the result of the first systematic attempt to gather statistics on household manufactures in the country at large, and at the same time furnish concrete data to substantiate the generalizations made by the Secretary of the Treasury and his assistant, they are worth presenting in some detail, along with certain facts from other sources which serve to validate them and at the same time furnish additional data to justify the generalization cited above.

[1] Coxe, *op. cit.*, p. 260.

[2] *American State Papers*, "Finance," I, 132.

On general conditions in New England, Phineas Bond, consul at Philadelphia to the British Foreign Office, in a special report on manufactures in 1789, said:

> In the 4 Eastern States viz. New Hampshire, Mass. Bay, Rhode I. and Connect. the people manufacture much larger quantities of woollens for their own use than they did before the war. . . . . 40,000 yards of coarse New England linen have been sold in Philada within the last year; . . . . Among the country people coarse linens in Mass. Bay of their own making are in such general use as to lessen the importations of checks and even coarse Irish linens nearly 2/3 ds. . . . . Pearl and potashes are made in great quantities throughout these States.[1]

Such conditions, according to Bond, existed at this time only among the farmers, the people in the towns wearing the European goods, and British in preference to all others.[2] A few scattering statistics will show that Bond's statement was a fair estimate of household manufactures in New England in about 1790.

In the town of Ipswich, Massachusetts, from August, 1789, to August, 1790, there were 28,496 yards of lace and 13,483 yards of edging manufactured in the family way.[3] The population of the town at this time was 4,562.[4] In 1793, Whittemore and Richards of Boston were making 12,000 dozens of cotton and woolen cards yearly; and from 2,000 to 3,000 dozens were made annually in other parts of the state.[5] These cards were sold to the country people for carding wool and cotton, as carding machines had not yet come into general use in this country. In the year 1790, 30,000 yards of woolen cloth were made in the town and vicinity of Providence,

[1] "Letters of Phineas Bond," edited by Jameson, in *American Historical Association Report*, 1896, I, 651.

[2] *Ibid.*, p. 634. The Manchester cotton goods were selling at this time (1789) at 25 per cent less than Philadelphia cotton goods. Bond gave as reasons for the New England preference for home goods populousness of the country, cheapness of living and activity and punctuality of the people (*ibid.*, p. 635).

[3] *Hamilton Papers for 1790–1791*, L. C. (1545). This is the number of the manuscripts in the L. C. Joseph Dana, who reported the above said that most of the families were waited upon twice by the young ladies who undertook the inquiry. Twenty-two samples of black lace and edging were sent along with the report. These are still in an excellent state of preservation.

[4] Coxe, *op. cit.*, p. 266.

[5] Fessenden, *The Register of Arts*, p. 294.

Rhode Island, in factories and private families, and in the first nine months of 1791 there were manufactured in a family way in the same town 25,262 yards of linen cloth, 5,858 of cotton, 3,165 of woolen, 512 of carpeting, 4,093 pairs of stockings, 859 pairs of gloves, and 260 yards of fringe.[1] In Northfork, Connecticut, in 1790, 29 families raised and spun 1,200 runs of silk.[2] The reports from the various towns in this state sent to Hamilton indicated that family manufacturing was carried on to a very great extent. For example, 9,800 yards of linen and woolen cloth were made in 1790 in the town of Southington.[3] Norwich, Middleton, Montville, and Stamford were making in the family way considerably more cloths of various kinds than they used. Some of the surplus was bartered at the village stores and the remainder was sent to the southern states.[4] In Suffolk, 400 families worked up annually about 10,000 pounds of wool and 20,000 pounds of flax;[5] and in New London and Cornwall every family wove enough coarse linens and woolens for its own consumption.[6] Besides clothing, such necessities as sail-cloth, bedticks, thread, fringe, silk buttons, hosiery, nails, spikes, sewing silk, pot and pearl ashes were made. Whatever surplus of these articles existed was sent to the middle and southern states. Commenting on this, Coxe said: "Here then is *a surplus* of household manufactures sold *out of the state*. It is an acknowledged fact that New England linens have affected the price and importation of that article from New York to Georgia."[7]

There was as much, or even more, household manufacturing in the northern part of New England about 1790 as in the southern. A great deal of tow cloth was made in the country towns of New Hampshire, much of which was sent south to clothe the slaves. Pot and pearl ashes were also exported in large quantities.[8] Every family in Vermont raised a quantity of flax and carried on a small manufacture of linen, and from the wool of their own raising the

[1] Coxe, op. cit., p. 267.

[2] *The American Pioneer*, I, 146.

[3] *Hamilton Papers*, L. C. (1865).

[4] *Ibid.* (1813, 1882–83, 1841, 1871–72).

[5] *Ibid.* (1853).

[6] *Ibid.* (1809–10, 1859).

[7] *Op. cit.*, p. 265.

[8] Winterbotham, *View of the United States*, II, 118.

"bigger part of the farmers manufactured their woolens."[1] Much maple sugar was likewise made, 40 families in Orange County making 13,000 pounds in 1791.[2] The average yearly amount made by every family in the outer district was about 250 pounds.[3] The farmers made much of their corn into spirits.[4] In Maine, "almost every family manufactured wool and flax into cloth, and made farming utensils of every kind for their own use,[5] From these concrete data concerning actual conditions in this region it can be observed that the generalizations cited above were not overdrawn, especially in so far as they related to the New England states.

Bond made no general summary of the condition of household manufactures in the middle states as a whole in his report on manufactures to the home office in 1789. Comments on each state separately were made instead. Regarding New York he said: "Coarse woollens and some linens are made among the farmers but these fall infinitely short of their own consumption." On conditions in New Jersey he commented as follows: "The manufactures in N. Jersey made in private families are now increasing and the farmers in general paying infinitely more attention to domestic manufactures than they have done since the war. Coarse woollens and coarse linens are made in private families fit only for the use of servants and not in a quantity to supply even them." Of what was being done in Pennsylvania, he remarked: "In this state also the farmers raise large quantities of flax and hemp and some wool; their domestic manufactures are of a coarser sort and seldom seen in cities and towns. Tow linens, lindseys, and some sort of coarse linens are attended to with more care and industry than formerly, and in some small quantities offered for sale."[6] It was said of Delaware: "In this state as in the neighboring state of Pennsylvania, the advancement of domestic manufactures is encouraged, attention is payed to the raising of hemp flax and

[1] Williams, *Natural and Civil History of Vermont* (ed. 1794), pp. 315 f.

[2] Winterbotham, *op. cit.*, II, 54.

[3] Williams, *op. cit.*, p. 319.

[4] Winterbotham, *op. cit.*, II, 53. [5] *Ibid.*, 221.

[6] "Letters," *op. cit.*, p. 652, for New York, New Jersey, and Pennsylvania.

wool but the articles manufactured bear no sort of proportion to the wants of the laboring part of the people."[1]

The raw materials, implements, and finished products, connected with manufacturing in the household, listed in 44 out of 49 inventories of Ulster County, New York, covering the period from 1788 to 1792, indicate that Bond's estimate was correct, at least for one county. For example, in the 44 itemized inventories, spinning-wheels (kind not designated) appeared 23 times with a total of 44 wheels; woolen wheels, 21 times; small wheels, 9; sheep, 20; flax, 11; weaver's loom, 16; sheep's wool, hatchels, shoe leather, and linen yarn, 3 each; wool cards, reels, and quill wheels, 4 each; yarn (kind not designated) and woolen yarn, 5 each; reeds and spool wheels, 6 each; hemp, linen cloth, and warping-bars and spools, 2 each; and flannel cloth, wool combs, shoemaker's tools, woolen cloth, cotton yarn, tow yarn, homespun cloth, homespun coats, tow cloth, clock reel, weaver's brushes, spooling wheel, weaver's spools, weaver's wheel, shuttles, and checks, one each.[2] Such data show that the people in Ulster County had in their homes both the raw products and the implements necessary to supply their needs for clothing and household textile supplies.

The Revolution changed the South from a region depending almost wholly upon the outside world for manufactured commodities to one in which many of such commodities were made by the people in their homes or on their plantations. A few facts from letters written to Hamilton when he was collecting data for his report will substantiate this. For example, the individual reporting on conditions in the two counties on the eastern shore of Virginia, said: "I suppose that $\frac{3}{4}$ of the people are clothed in their own Manufactory; Leather Shoes we make cheafly within ourselves and Common Stockings. . . . ."[3] Similar conditions exist in other counties of this state. The inhabitants of Princess Anne, Norfolk, and Nansemond counties made most of their negro clothing and their coarse cloth. Each family within a radius of ten

[1] "Letters," *op. cit.*, p. 654.

[2] Anjou, *Ulster County, New York, Probate Records*, "Wills," II.

[3] *Hamilton Papers*, L. C. (1886).

miles of Surry made annually about 200 yards of cloth. At least five-sixths of all the cloth, shoes, and stockings used in these families were homemade.[1] In the counties adjacent to Culpepper, the rich planters made a great deal of linen cloth for slaves, as did the middle classes also, while the poorer sort made it for their own wear. The first two classes also made cloth for coverlets, bedticks, and jeans. The rich bought most of their fine shoes and stockings.[2] The amount manufactured by each of twenty families in twelve months in King William County (rich and poor indiscriminately taken) is exhibited in Table I.

TABLE I

QUANTITY AND VALUE OF CLOTH AND STOCKINGS MADE BY TWENTY FAMILIES IN KING WILLIAM COUNTY, VIRGINIA, FROM JANUARY 1, 1790, TO JANUARY 1, 1791*

HEADS OF FAMILIES	NUMBER IN FAMILY			CLOTH MADE		STOCKINGS MADE		VALUES OF CLOTH AND STOCKINGS	
	White	Slave	Total	Yards	Value	Pairs	Value	Total	Per Capita
Thomas Avera	4	9	13	263	$152.25	15	$10.17	$162.42	$12.49
James Ruffin	7	36	43	468	266.83	37	22.85	289.68	6.73
Sterling Ruffin	4	31	35	287	164.50	25	13.94	178.44	5.09
David Pannell	8	23	31	400	232.75	29	19.06	251.81	8.12
John King	3	5	8	127	74.25	7	5.09	79.34	9.91
Heckerson Bagwell	3	1	4	69	43.50	7	5.52	49.02	12.25
Nathaniel Fox Inn	6	14	20	200	112.50	15	9.31	121.81	6.09
Wm. Tawler	4	1	5	68	41.00	6	5.10	46.10	9.22
Barnard Lipscomb	5	13	18	130	70.83	6	5.10	75.93	4.21
Mathew Towler	10	0	10	56	34.33	8	6.80	41.13	4.11
James Howard	4	5	9	52	29.17	3	2.55	31.72	3.52
Samuel Howard	4	0	4	39	24.08	4	3.40	27.48	6.87
Wm. Starke	3	8	11	00	00.00	0	0.00	00.00	0.00
John Hollins	5	0	5	33	21.58	4	3.40	24.98	4.99
Mrs. Aawse	3	6	9	40	25.75	8	5.51	31.26	3.47
Charles Lipscomb	3	2	5	50	32.08	7	5.42	37.50	7.50
Peter Richeson	8	8	16	147	95.33	21	15.70	111.03	6.93
Edw. P. Chamberlayne	3	14	17	70	32.50	8	3.36	35.86	2.10
Wm. Newman	5	14	19	145	86.67	21	13.98	100.65	5.29
Drury Ragsdale	4	15	19	270	163.75	29	18.22	181.97	9.57
Total	96	205	301	2,914	$1,703.65	260	$174.48	$1,878.13	$ 6.23

*Based on the report of Drury Ragsdale, *Hamilton Papers* (1892). The values in the report are given in pounds, shillings, and pence. In expressing these in dollars, the values used by Coxe in his *View of the United States* (p. 261) were adopted, one pound equaling $3.33⅓.

To show that King William County was not alone in the attention given to household manufactures, an account of the output for one year in another county is submitted (Table II). The

[1] *Hamilton Papers*, Anselm Bailey's report.

[2] *Ibid.* (1912).

total value made by the twenty families included in this account was sightly less than that made by the families included in the preceding tabulation.

TABLE II

ACCOUNT OF MANUFACTURES MADE IN SURVEY NO. 2 BY TWENTY FAMILIES FROM THE RICHEST AND THE POOREST IN THE SPACE OF ONE YEAR FROM JANUARY 1 TO DECEMBER 31, 1790*

Classes of Four Families in Each Class	Linen Cloth, Yards	Yarn Cloth, Yards	Cotton Cloth, Yards	Stockings, Different Kinds, Pairs	Shoes, Different Kinds, Pairs
First	187	225	700.5	51	112
Second	225	95	440	46	57
Third	320	24	296	40	38
Fourth	254	24	177	28	17
Fifth	109	24	68	9	13
Total	1,095	392	1,681.5	174	237

* *Hamilton Papers*, L. C. (1909). On the reliability of the data included in this and the preceding table Coxe commented as follows: "These papers have been obtained under circumstances that justify a reliance on their truth and are believed to be very little variant from the medium of the state of Virginia" (*op. cit.*, p. 262). To justify the last half of this statement Coxe cited the facts that during the year 1790, in the counties of Accomac and Northampton, 315,000 yards of flaxen cloth, 45,000 of woolen, 30,000 of cotton, and 45,000 of linen and woolen, and a quantity of coarse stockings equal to the demand were made in the 2,729 families living in these counties at this date (*ibid.*, pp. 262 f.).

The value of the cloth, stockings, and shoes made by the twenty families included in Table II was as follows: linen cloth, $273.75; yarn cloth, $143.33; cotton cloth, $980.83; stockings, $130.50; and shoes, $263.33—making a total of $1,791.74 and an average of $89.59 in each family. The average value in each of the forty families represented in the foregoing tables was $91.75. There were in Virginia (exclusive of Kentucky) in 1790, 70,825 families. On the basis of what was made in the forty families from which definite statistics were collected, the value of goods made in homes during the year 1790 in this state was $6,498,183.75. If, as was claimed by those reporting,[1] the situation in the families included in the two foregoing tabulations was applicable to the whole of Virginia, this computation is a fair one. It must, however, stand as merely an estimate, since the first census included no statistics on manufactures of any kind, making the checking of such calculations an impossibility.

[1] *Ibid.* (1903 f.).

The reports from the other southern states indicated that they too were quite generally engaged in household manufacturing. Generalizing on the basis of the reports sent him in 1791 from the South, Coxe said: "The family manufactures of the middle and interior counties of Virginia, North Carolina, and the interior counties of Georgia, South Carolina, and Maryland, are said to be greater in value than the articles of foreign manufacture which they use."[1] The reports from the interior of South Carolina stated that the inhabitants manufactured entirely in the family as much as they had occasion for of cotton, flaxen, hempen, and woolen goods. It was also evident from the reports from North Carolina and Georgia that these two states did as much as Virginia and South Carolina.[2]

But brief mention need be made here of conditions in the frontier settlements of Kentucky and Tennessee about 1790. In the principal stations and towns there were stores in which were kept such articles as nails, calicoes, axes, broadcloth, delftware, silks, furniture, bonnets, lumber, hats, sugar, medicine, whiskey, and books, all jumbled together. The women of the country brought their linen, linsey, and jeans, and bartered them for tea, coffee, and such articles as they could not make themselves. The store sold few things that could be produced at home.[3] These conditions were common on the older frontier everywhere.

[1] *Op. cit.*, p. 298. A similar statement was made by the editor of the *American Museum* in 1791. This statement occurs in XI, 231, in the first of a series of articles on "Reflection on the State of the Union." Carey, the editor of the *Museum*, no doubt based his conclusions on Coxe's statement quoted above.

[2] *Ibid.*, p. 264. Both Bishop and Winterbotham give similar statements regarding South Carolina. The former states that in about 1790 the planters began generally to clothe their slaves with homespun, from the produce of their cotton fields. The material was prepared for the spindle by the field hands, spun in the family, and then sent to the nearest weaver (*History of American Manufactures*, II, 27). Winterbotham says: "Late accounts from the interior parts of this State inform us, that the inhabitants manufacture, entirely in the family way, as much as they have occasion for; that cotton, hemp, and flax are plenty; that they have a considerable stock of good sheep; that great exertions are made, and much done in the household way; that they have long been in the habit of doing something in family manufactures, but within a few years past great improvements have been made. The women do the weaving and leave the men to attend to agriculture" (*op. cit.*, III, 255).

[3] Durrett, "Condition of Kentucky When She Began Statehood," *Filson Club Publications*, No. 7, p. 84.

From the concrete data presented above, it is evident that the general statements of Coxe and Hamilton quoted at the beginning of this section were not overdrawn. When the people returned to their home manufactures after their sad experience with foreign commodities, they did it with a conviction that economic dependence was as detrimental to their prosperity and happiness as political dependence. Before the general establishment of mills and factories, the household was the big factor in attaining the economic independence so much needed and desired. During the two decades next following 1790, the family factory was certainly the dominant element in the struggle for independence of foreign mills, especially in the matter of clothing and household textile supplies.

[*To be continued*]

A STUDY OF THE EMPHASIS ON VARIOUS PHASES OF READING INSTRUCTION IN TWO CITIES

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Teachers consciously or unconsciously emphasize certain phases of instruction more than other phases. This may be due to one or more of a variety of causes, such as a conscious attempt to improve the quality of instruction along one or more specific lines, recently stimulated interest in certain phases of classroom work, special preference for given phases of a subject, or habitual modes of procedure in teaching. Very frequently certain phases of instruction receive special emphasis throughout a school or a city system owing to the educational view of the superintendent or supervisor, to new movements initiated in harmony with progressive ideals, to demands made by the public, or to classroom practices which spread through observation by one teacher of the practices of those about her. Whatever the cause may be, the final results of instruction reflect to a large extent these special points of emphasis. If the points of emphasis have been wisely chosen, the results will show rapid development by the pupils along highly desirable lines; if the points of emphasis have been poorly chosen, the results will be open to serious criticism.

The recent studies of reading made in connection with the Cleveland Survey and the St. Louis Survey give striking illustrations of the fact that cities differ widely in their emphasis on various phases of reading instruction. They show, furthermore, the influence which differences in instruction have upon the quality of the results. It is the purpose of this article to present these facts to the readers of the *Elementary School Journal* with the hope that their discussion may further the critical attitude which hundreds of teachers are taking toward the more important problems of teaching. The results secured in these studies enable us to compare the relative emphasis in Cleveland and St. Louis on

such phases of teaching as the mechanics of oral reading, the rate of silent reading, and the comprehension of what is read. In connection with the mechanics of oral reading it has been possible to compare the relative emphasis on speed and accuracy of pronunciation. Inasmuch as the same tests were used in these studies under approximately the same conditions during the same month of the school year, it will be possible to make rigid comparisons of the results secured.

The oral-reading test which was used consisted of a series of twelve paragraphs arranged in the order of increasing difficulty. The tests were given to the pupils individually by a principal, or by a special teacher who had been trained for the work. As a pupil read, the teacher recorded the time required to read each paragraph, together with the number and character of the errors which were made. A pupil continued to read until he had made seven or more errors in each of two paragraphs. By means of a system of scoring based on the time required to read and on the number of errors, it was possible to represent the achievement of a pupil or a class in numerical terms. Inasmuch as the primary purpose of this article is to discuss the results of the investigations rather than the technique of giving the tests and scoring the results, additional details of the latter will be omitted.[1]

The average oral-reading scores for Cleveland and for St. Louis are presented for each grade in Chart I. A word of explanation is necessary in order that the chart may be readily understood. Ability to read a certain paragraph without error means less on the part of a child in the upper grades than on the part of a child in the lower grades. Grades will have to be compared with each other, therefore, by representing different levels of expectation. These different levels are expressed graphically in the chart by the relative positions of the vertical lines. Each line represents the scale for a grade and begins below at the point where

[1] A complete discussion of the reading investigation carried on in Cleveland is given in the Cleveland Survey monograph entitled, *Measuring the Work of the Public Schools*, by Dr. Charles H. Judd. The discussion of the St. Louis reading investigation will be published in the near future by the Board of Education of St. Louis.

Gray's "Standardized Tests in Oral and Silent Reading" were discussed in detail in the February number of the *Elementary School Journal* of the current year.

a score of 10 should be recorded and ends above at the point where a score of 70 belongs for that grade. The full-drawn oblique line near the middle of the chart represents the average score of all the Cleveland schools which were tested. The dotted line above the Cleveland record represents the average score of all the St. Louis schools which were tested. The chart shows very clearly that from the first to the eighth grades, inclusive, St. Louis

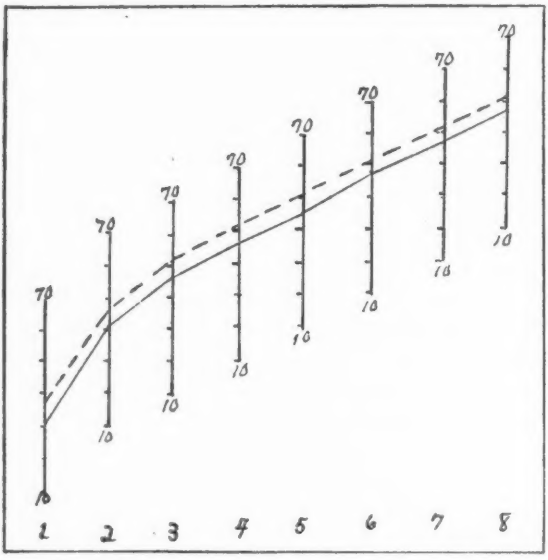

CHART I.—Average oral-reading scores for 10,526 St. Louis pupils and for 2,193 Cleveland pupils.

pupils have attained a higher level of achievement in the mechanics of oral reading than have Cleveland pupils. The amount of this superiority represents the normal growth which would take place in from one-eighth to one-half of a year, depending on the grade which is considered. It is fair to assume either that greater emphasis is laid on oral reading in St. Louis, or that the effort put forth secures relatively better results.

An analysis of the results secured by St. Louis and Cleveland throws significant light upon the cause for differences in the levels

of achievement attained by different cities. Since the oral-reading scores are based on the number of seconds required to read each paragraph, together with the number of errors made, differences in achievement must be attributed to differences in ability which pupils exhibit in one or both of these phases of oral reading. Table I presents the average number of errors made and the average number of seconds required by the pupils of St. Louis and of Cleveland in reading paragraph 1 and paragraph 4 of the test. The entries in the table may be read as follows: in reading paragraph 1, 223 first-grade pupils of Cleveland required on the average 35.13 seconds, and made 1.84 errors per pupil, while 315 first-grade pupils of St. Louis required on the average 43.42 seconds to read paragraph 1 and made 1.81 errors per pupil.

A word of explanation is necessary concerning the importance of rate and accuracy in oral reading before any conclusions can be drawn concerning the relative efficiency of Cleveland and St. Louis. Table I shows that first-grade pupils in Cleveland read paragaph 1 more rapidly than first-grade pupils of St. Louis. Throughout the grades the superiority of Cleveland in rate of reading is maintained. St. Louis, on the other hand, secures a higher degree of accuracy in pronunciation in the first grade and maintains this superiority throughout the grades. This comparison gives evidence of a difference in emphasis in the two cities. Classroom observations revealed differences in practice in regard to rate and accuracy. Cleveland believes that pupils should learn to associate the sight of a symbol with its meaning very quickly, and to this end makes extensive use of flash-card exercises in the lower grades. St. Louis, on the other hand, places accuracy above speed and permits the pupils to read more slowly. This greater deliberateness on the part of St. Louis pupils is shown even more clearly when one considers the records for paragraph 4. The superior results secured by St. Louis in accuracy are commendable. The superiority of Cleveland in rate suggests the possibility that St. Louis might profit by Cleveland's example in the earlier grades. If accuracy of pronunciation could be maintained and at the same time rate increased, the general level of achievement in St. Louis could be noticeably increased. The foregoing discussion reveals the fact

that an analysis of the results of teaching any subject such as oral reading is necessary in order to determine the lines along which constructive effort should be exerted.

TABLE I

AVERAGE RATE OF ORAL READING AND AVERAGE NUMBER OF ERRORS ON PARAGRAPH 1 AND PARAGRAPH 4 FOR CLEVELAND SCHOOLS AND FOR ST. LOUIS SCHOOLS

GRADE	CLEVELAND			ST. LOUIS		
	No. of Pupils	No. of Seconds	No. of Errors	No. of Pupils	No. of Seconds	No. of Errors
			PARAGRAPH 1			
I	223	35.13	1.84	315	43.42	1.81
II	216	23.29	1.31	410	23.27	0.77
III	328	17.78	0.72	325	19.21	0.57
IV	323	15.75	0.65	281	15.62	0.37
V	242	14.36	0.64	17	16.17	0.29
VI	216	13.59	0.56	22	15.05	0.18
VII	220	14.47	0.44	20	15.15	0.20
VIII	193	13.44	0.41	20	16.10	0.10
			PARAGRAPH 4			
I	80	42.19	2.86	79	59.80	2.78
II	258	30.63	2.26	365	33.12	1.77
III	307	25.51	1.90	420	26.63	1.58
IV	312	22.15	1.84	430	21.83	1.16
V	231	19.98	1.71	407	21.15	1.11
VI	208	17.94	1.59	395	19.49	0.94
VII	221	17.68	1.37	388	17.66	0.93
VIII	193	16.62	1.24	413	17.85	0.73

The silent-reading tests which were given consisted of three short selections of varying degrees of difficulty. The simplest selection was chosen for pupils of the second and third grades; a more difficult selection was used for pupils of the fourth, fifth, and sixth grades, and the most difficult selection for pupils of the seventh and eighth grades. Each selection used in the test was printed in three sections on a card. The middle section contained 100 words in the case of the easiest selection and 200 words in the case of the two more difficult selections. This middle section, in the case of each selection, contained the material upon which the time record was based. The section at the left of the middle section served a double purpose: first, it gave the pupil something

to read by way of preparation for the test part of the selection; secondly, it gave the tester an opportunity to determine the moment at which the reader moved his eyes from the bottom of the card to the top of the middle section where the time record was begun. The pupils were tested individually, and a record was secured of the number of seconds required to read the middle section. The average rate of the class was found by determining the average number of seconds required to read 100 words and then expressing this result in terms of the average number of words read per second.

The average rates by grades are presented graphically in Chart II for Cleveland, for St. Louis, and for thirteen other cities.

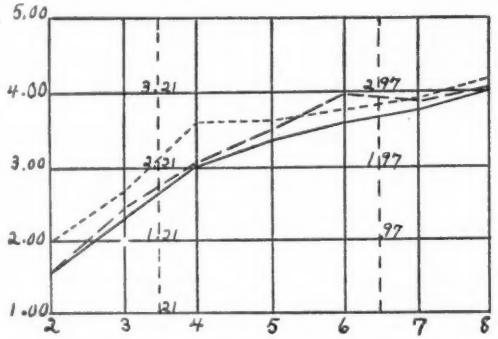

CHART II.—Rates in silent reading for 8,928 St. Louis pupils, for 1,831 Cleveland pupils, and for 2,654 pupils of thirteen other cities.

Since three selections were used in the silent-reading tests, two readjustments have been necessary in the chart. The points of these readjustments are between the third and fourth grades, and between the sixth and seventh grades. In Chart II, dotted vertical lines are drawn at each of these points. The numbers at the left of the chart indicate the number of words read per second in the easiest selection. The numbers on the line between the third and fourth grades indicate the equivalent number of words read per second when the second more difficult passage was used, and the numbers on the line between the sixth and seventh grades indicate the equivalent number of words read per second when

the most difficult passage was used. The numbers at the bottom of the chart indicate the various grades which were tested from the second to the eighth, inclusive. In Chart II, the rate at which the pupils of Cleveland read is represented by the dotted line; the rate at which the pupils of St. Louis read, by the broken line, and the average rate at which the pupils of thirteen other cities read, by the solid line. The chart shows that the pupils of Cleveland and of St. Louis read more rapidly than do the pupils of thirteen cities which have been tested under similar conditions. A comparison of the records of Cleveland and St. Louis shows that Cleveland is securing superior results on the average in all grades except the sixth. Such a comparison might result in a feeling of considerable satisfaction on the part of both Cleveland and St. Louis schools, were it not for the fact that a much higher level of attainment is possible, as evidenced by the records made in a number of schools. Very little attention has been given in the past to the rate of silent reading. As better methods are worked out for securing results in this phase of reading achievement, it may be found that the present attainment of these cities is below the level which might be secured through more skilful teaching.

Furthermore, it should be noted that the slower rate at which pupils in St. Louis read silently corresponds with the results discussed in earlier paragraphs, showing greater deliberateness in rate of oral reading, particularly in the lower grades. A careful study of individual records shows clearly that those pupils who are able to move forward quickly in oral reading are the pupils who read most rapidly silently. Fluency in oral reading is therefore a prerequisite to rapidity in silent reading. Since rate of silent reading is such an important factor in achievement during study-periods, special drill exercises should be given which will increase the rate at which pupils read silently. An analysis similar to the foregoing carried on in any city should be productive in revealing points of strength and weakness in the instruction which is given in oral reading.

At the time that the silent-reading tests were given, the ability of the pupils to master the thought of what they have read was tested. This was done by means of a written reproduction of what

had been read and by a series of ten questions in regard to specific points in the selection. A pupil's reproduction was scored by checking out all wrong statements, all irrelevant statements, and all repetitions. The words correctly reproduced were then counted. The reproduction score was determined by finding the ratio of the words correctly reproduced to the total number of words read. Each question answered correctly was given a grade of ten points. The reproduction score and the grade received for correctly answered questions were then averaged to secure a "quality" score.

The average quality scores for Cleveland, for St. Louis, and for thirteen other cities are compared in Chart III. Readjustments

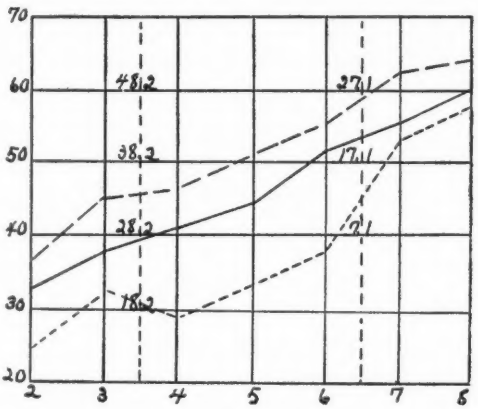

CHART III.—Average quality scores in silent reading for 8,928 St. Louis pupils, for 1,831 Cleveland pupils, and for 2,654 pupils of thirteen other cities.

appear in this chart similar to those described in connection with Chart II. Here again the broken line presents the results from St. Louis, the full-drawn line the result from other cities, and the dotted line the results from Cleveland. The chart shows that St. Louis attains a level of achievement in quality of silent reading which is distinctly above the average for thirteen cities, while Cleveland, on the other hand, has a level of achievement which is as distinctly and uniformly below the average. This compari-

son is impressive, and its significance cannot be disregarded. It means that of two cities which attain equally high results in rate of silent reading, the one gives effective emphasis to quality of reading, while the other fails to secure results which are at all comparable. The comparison shows clearly the need of additional emphasis on thoughtful mastery of the printed page on the part of Cleveland.

The foregoing comparisons have indicated points of strength and weakness in the results secured in teaching reading in Cleveland and St. Louis. They have indicated in a very striking way that certain phases of reading ability are emphasized more strongly in one city than in the other. Each city is superior in certain respects. The comparisons in the foregoing report should call to the attention of each city certain errors in emphasis which have characterized their instruction in reading. In addition, such comparisons indicate some of the lines along which intensive constructive effort must be expended in order to secure the highest degree of efficiency in instruction. They should suggest to the teachers of other cities the need of similar critical comparative studies of their own practices and results.

THE VALUE OF HOME STUDY UNDER PARENTAL SUPERVISION

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We may safely assume, I think, that parents who are daily interested in the progress of their children, will, if they have the opportunity, supervise the children's home study. This is true regardless of the provision made by the teacher for aiding the child to prepare the exercises in school. Let me be personal. I had three children in school a few years ago and it pleased me very much when the teachers announced that my children would have ample opportunity to prepare their lessons at school. These provisions were made because it was recognized that the teacher was the properly qualified person to supervise the children's study. Moreover, it was argued that methods of teaching have so changed in these latter days that parents are unable to instruct the children in a way that will not conflict with the school methods. Home study and home preparation should, therefore, give way to school study and school preparation.

These directions were pleasing to me because I had served as principal and later as superintendent, and these words sounded so much like my old arguments that I knew the reasoning was sound, and my household was advised to let the teacher teach the children, and I was willing to dismiss the whole question.

When the reports began to come in, however, there was an unmistakable warning that unless my children made considerable improvement they would be classed with the repeaters and the retarded, and then home study and parental supervision were again inaugurated in my household regardless of the improvement in school methods.

The foregoing story is told, not because it is an exceptional case, but because it seems to be the rule. Parental supervision of the activities of the child is an instinct. It is therefore general and

unavoidable. But for this instinct parents would not make the sacrifice to send the children to school. These questions, then, are pertinent: Can a public school be so conducted that the assistance of the parents may be entirely eliminated? If such a school is possible, is it desirable?

After pondering over these questions for a number of years, I observed that children who received close attention from their parents tended to progress faster as a rule than those who came from homes where this attention was wanting, either through negligence or through inability to give the right kind of attention. This question then arose: Is not the grading of the child adjusted unconsciously to home study under parental supervision? In other words, the child who receives double instruction, from the parent and from the teacher, makes better progress than the child who receives the single instruction of the teacher. Hence a school that is so organized that the more progressive students may save a year or more is as a rule either consciously or unconsciously recognizing parental supervision.

The value of such an organization has been discussed so thoroughly and so generally of late years that it is unnecessary to consider it here. "Elastic grading," "the Cambridge plan," "the Portland plan," "the evil of the graded system," etc., are subjects which have been so constantly before the public, and the reasonableness of the discussion has been so generally admitted, that the argument is here accepted. But the question to be considered is: To what extent is the organization of such a school adjusted to home study under parental supervision?

In order to secure sufficient information to warrant a reasonable conclusion, the fourth, fifth, and sixth grades of the city schools of Durham, North Carolina, were studied. The grading of the Durham schools is elastic and is a modification of the Cambridge plan. Each grade has at least two sections, A and B, and the student in the A section of the fourth grade may gain a year between the fourth grade and the high school (high-school work begins with the eighth grade).

The home conditions and the home study of 268 pupils were studied. They were classified in school as follows: fourth grade,

122; fifth grade, 74; sixth grade, 72. These 268 pupils came from all classes of homes in the town of Durham. Some were from the factory district, while others came from the more fashionable and wealthier homes of the city; but a large majority, of course, came from the middle-class families.

As each home was visited the following blank was used, on which was recorded the result of the visit:

.....Grade

Name of Child..... Age.....

Name of Parent..... Street Address.....

Subjects Studied at Home / Class Standing	Amount of Home Work	Assistance at Home
Arithmetic.....		
Spelling.....		
Geography.....		
Language.....		
History.....		
Hygiene.....		
Reading.....		

1. Does the child study in a room separate from the family?
2. What subject seems most difficult for the child?
3. Remarks as to the nature of the assistance, the condition of the home, and the possibilities of good supervision:

After each home had been visited and the foregoing blank had been filled out for each child, the superintendent supplied the class standing of each child, which was written immediately after each subject in the above form. The school sends out monthly reports, and this survey was made at the end of the fall term. Each pupil had received four reports. The method of reporting the class standing is as follows:

A grade of 1=90 to 100 per cent
A grade of 2=75 to 89 per cent
A grade of 3=60 to 74 per cent
A grade of 4=failure

RESULTS IN THE FOURTH GRADE

In the fourth grade 122 pupils were studied. The home of each pupil was visited, the parents were consulted, the home conditions were studied, the interests of the parents were noted, and the possibilities of home supervision were estimated. Of these pupils 65 were classified in the A section. That is, they were considered the more progressive, since they would in all probability gain a year by the time the high school was reached. The remaining 57 were classified in the B section. A majority of the pupils in this section would in all probability reach the high school in four years, but a considerable number would require five years to complete the four grades.

Since there are as a rule no repeaters in the Durham schools, except under very extraordinary conditions, it was decided to take the class standing of the pupils as a criterion, and for convenience to divide the pupils into two groups: (1) those who made an average of 2 or more in all subjects requiring previous preparation, and (2) those who made an average of less than 2 in all such subjects. The survey of the A section of the fourth grade is interesting. There was a total of 65 pupils in this section. Of this number, 38 came from homes where the home study was supervised and where the conditions for home study and home supervision were very favorable. For the first term, 30 of these made an average grade of 2 or more. Only 8 had a grade of less than 2. The number that received no home assistance or who came from homes where conditions were either not naturally favorable or where parents did not have sufficient control over their children to require home work of them was not so large, numbering only 27. Of this number 13 had a grade of 2 or more, while 14 had a grade of less than 2.

The A section, however, shows not only those who are taught at home, but the naturally quick and ambitious students, for in every such grade there will be a limited number of pupils who come from the poorest and most illiterate homes. Hence the 13 students in the section who made an average of more than 2 and yet received no home assistance might have included, and doubtless did include, a number of such pupils.

In the B section, however, the evidence is more nearly conclusive. In this section 57 children were studied. It was found that 29 of these pupils received home assistance, and of this number, 26 received a grade of 2 or more, while only 3 fell below that average grade. But 28 pupils received no home supervision, and only 4 made an average grade of 2 or more, while 24 fell below 2. Very nearly all of these 122 pupils studied at home. But home work without parental supervision was of little value except to pupils of the A section.

These results indicate that the organization of the fourth grade is adjusted unconsciously to home supervision, and that the child of mediocre endowments coming from a home where the parents are either unable or unwilling to give attention to his progress has little chance of success in school. On the contrary, the school has a tendency to run over such a child and drop him by the wayside as the educational chariot progresses.

TABLE I

FOURTH GRADE

	SECTION A		SECTION B		TOTAL
	Grade above 2	Grade below 2	Grade above 2	Grade below 2	
Home supervision.....	30	8	26	3	67
No home supervision....	13	14	4	24	55
Total.....	43	22	30	27	122

RESULTS IN THE FIFTH GRADE

The results shown in the fifth-grade survey are very similar. In this grade 74 pupils were studied. They were classified in school as follows: A section, 38; B section, 36.

In the A section 21 pupils received home assistance, and only 1 of these fell below an average of 2. But 17 received no home assistance, and of this number only 2 fell below the grade of 2. The standing of this section was high. Only 3 pupils out of 38 had an average grade of less than 2. Here again we have the quick, bright, ambitious child easily adaptable to school work and seem-

ingly able to do his own work without supervision. In addition, the pupils are a year older and are able to rely more on themselves than when just entering the grammar-school grades.

It is in the B section again that the pathetic story has its setting. Here 36 pupils were studied, of whom 24 received home assistance and supervision. Of these 19 made a grade of 2 or more, while only 5 fell below 2. However, of those who received no home assistance and had to rely solely on their own initiative or on such help as they might find, 10 fell below 2, while only 2 could stand with the elect.

TABLE II

FIFTH GRADE

	Section A		Section B		Total
	Grade above 2	Grade below 2	Grade above 2	Grade below 2	
Home supervision.....	20	1	19	5	45
No home supervision....	15	2	2	10	29
Total.....	35	3	21	15	74

RESULTS IN THE SIXTH GRADE

It is noticeable in the fifth grade that home supervision is not quite the important factor that it is in the fourth grade, although the difference is very slight. In the sixth grade, however, the effect of home supervision on the standing of the child is not so marked although it is still an important factor. The 72 sixth-grade pupils studied were classified as follows: A section, 33; B section, 39. In the A section 20 pupils came under home supervision. Of these, 18 made an average grade of 2 or more, while only 2 fell below 2. But of the 13 who received no home assistance, 12 made an average grade of 2 or more, while only 1 fell below 2. The record of the A section of the sixth grade is similar to that of the fourth and the fifth grades.

The test came again, however, in the B section. Here 39 pupils were studied. Of this number, 18 received home supervision, of whom 15 made an average grade of 2 or more, while only 3 fell

below 2. But 21 received no home supervision, and of these, 11 made an average grade of 2 or more, while 10 fell below 2.

TABLE III

SIXTH GRADE

	SECTION A		SECTION B		TOTAL
	Grade above 2	Grade below 2	Grade above 2	Grade below 2	
Home supervision.....	18	2	15	3	38
No home supervision....	12	1	11	10	34
Total.....	30	3	26	13	72

CONCLUSION

The survey of the fourth, fifth, and sixth grades seems to justify this conclusion: Where the parents are capable of guiding the child and are inclined to supervise the home study, their children succeed in school. But where the parents are illiterate or for other reasons are unable or unwilling to supervise the home study, their children as a rule either make slow progress or are failures entirely when measured by the progress of their companions in school. The grammar school, as it is organized generally, is, therefore, consciously or unconsciously adjusted to the home work of the child under parental supervision, and the assistance of the parents is a necessary supplement to the work of the teacher, for without it the children do not, as a rule, succeed in school.

This survey shows, moreover, that the pupils of the grammar grades of the Durham schools are well graded. Here are found the ungraded rooms for the misfits, provisions made for the more progressive students, and consideration for the less progressive. But this fact still remains, that with these provisions working so well that there are very few repeaters the progress of the child through the grammar grades is dependent upon the kind of home from which he comes and the care with which the parents supervise his study.

Since these things are so, the school that undertakes to prohibit or even limit the home study without becoming thoroughly

acquainted with the parents and having a thorough understanding as to how much the teacher can do and the parents should do, is not only hitting at random in the educational world, but is running counter to a natural instinct. The most important step to take, therefore, it seems to me, is for the school supervisor to make the teacher conscious of this important, because necessary, factor and to bring about such a co-operation between the teacher and the parent that each may know the part that he is to take in this important work, in order that the worry and labor and confusion in the home and the distrust of the teacher that prevails to a greater or less degree in the home where the parents supervise the home work may be reduced to a minimum. The teacher should become the supervisor of the home supervision as well as the teacher of the children in school, since home-study without parental supervision is of little value, especially in the fourth and fifth grades.

Mothers' meetings, parents' meetings, community meetings, are attempts to bring about a better co-operation between the home and the school, and they seem to fail just at this point: in order to relieve the already overworked home of this burden, the school has tried to take over the whole task of educating the child, and this is both an impossible and an undesirable task as the schools are now organized. Many functions of the home, instead of being carried over to the school, should be restored to the home, and it is one of the functions of the school to restore them to the home and then aid the home in keeping them. But when circumstances make it impossible for the home to assist in the child's education some provision should be made in school to supply that deficiency without taking over permanently functions that naturally belong to the home.

INDIVIDUAL VARIATIONS IN ARITHMETIC

JAMES H. SMITH
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One of the most significant features of the various studies that have been made in arithmetic is the wide variation in the achievements of the pupils of any grade. The purpose of this study is to determine some of the causes of individual variations in arithmetic and to note the effects of certain corrective exercises

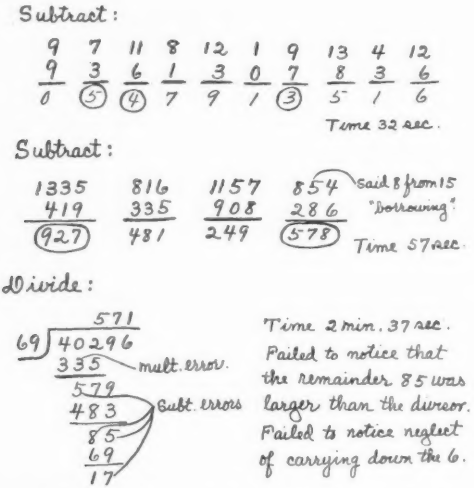
With this end in view, the arithmetic tests used in the Cleveland Survey[1] were given to Grades IIIB–VIIB of the Elementary School of the University of Chicago and the results were used to diagnose the points of individual weaknesses.

The complete set of results of these tests cannot be included in this article. These results showed a large amount of variation in both individuals and classes. There were pupils in the fourth grade who accomplished more in the same time than some pupils in the seventh grade. Furthermore, the best pupil in each grade was approximately three times as rapid as the poorest. Some of the pupils were very good in part of the fifteen sets of the test and extremely poor in other sets. This wide variability suggested the necessity of a more detailed study of certain individuals with particular emphasis on their points of weakness as shown by the results of the test.

Individual tests were then prepared and given to 88 pupils in Grades VA–VIIB. These tests were composed of examples from the regular test, but they were adapted to each individual in order to determine the nature of his difficulties in the sets in which he made low scores. Each pupil was asked to work the examples orally so that any mistakes could be definitely located. Notes were kept on a note pad and later copied on the individual's test

[1] C. H. Judd, *Measuring the Work of the Public Schools.* Published by the Survey Committee of the Cleveland Foundation, 1916.

sheet. The following reproduction shows a portion of one of the individual tests:



This individual test showed the pupil to be very weak in subtraction. Note that he missed 3 out of the 10 easy subtractions at the beginning of the test. The example in long division showed an incomplete understanding of that process, but even if he had understood the division process, he would have been unable to work the example correctly on account of making so many errors in the subordinate processes of multiplication and subtraction.

A careful analysis of the difficulties of each pupil was made and the errors of the 88 pupils tested were tabulated under the following headings:

Nature of the Error	No. of Errors
Incorrect addition, subtraction, and multiplication responses made in working long problems in multiplication and division	39
Incorrect addition responses in addition examples	14
Incorrect subtraction responses in subtraction examples	7
Incorrect multiplication responses in multiplication examples	7
Incorrect division responses in division examples	13
Carrying and copying figures	35
One process, through suggestion, carrying over into the next process	14
Trouble with the symbolism, particularly in fractions	25
Lack of knowledge of the process	28

This table shows some of the main causes of failure on the part of the pupils. One of the chief difficulties is the inability of the pupil to carry on two or more processes simultaneously. A large number of errors is due to the incomplete automatization of the simple facts of addition, subtraction, multiplication, and division. This defect comes out particularly when the attention is centered upon another process, as shown in the first item in the foregoing table. Psychological experiments have shown that two complex mental processes cannot be carried on at the same time without interference, unless one is made automatic. This study indicates then that more drill should be given to the tables of the four fundamental operations if we expect them to function properly in complex situations. The large number of errors in "carrying" and copying figures is also probably due to the attention being focused upon another part of the process rather than to the usual explanation of "carelessness."

Failures in fractions were due in many cases to lack of knowledge of the process. In other cases pupils failed to note the symbolism and could give the correct solution when the examples were read to them. Suggestion also played an important rôle in fractions. Many of the pupils carry the process of addition of fractions over into the solution of problems calling for subtraction and multiplication. They were very much surprised at the close of the test when their attention was called to the subtraction and multiplication signs.

While there are certain general tendencies that can be determined in such a study of individual difficulties, the principal benefit comes from the location by the teacher of points of weakness in each of his pupils. Any teacher will find such a study very useful in his efforts to improve the efficiency of his class.

In order to increase the efficiency of the pupils in the mechanical phases of arithmetic and to correct some of the errors that were observed, three types of drill were attempted: (1) class drill supplemented by individual assistance on the points of weakness as diagnosed by the results of the test; (2) class drill with extra drill periods provided for the slow pupils, who were drilled in groups rather than individually; and (3) merely class drill with explanations to the class as a whole.

The first type of drill was used in Grade VA. The teacher used three periods (of 25 minutes each) per week for four weeks for regular class drill. This class drill was supplemented at other periods in the day by special help to different pupils in the processes in which they were weak, and they were required to work extra examples in those processes after the help had been given. The drill was limited to the four fundamental operations and fractions. At the end of this month of drill, the pupils were given the original test a second time.

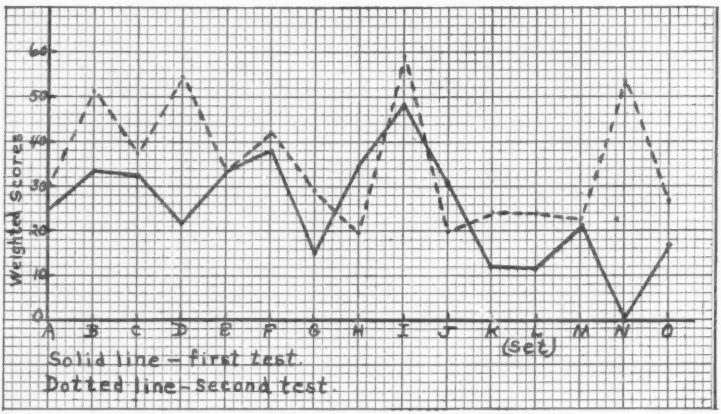


CHART I

Chart I gives an interesting comparison of the results of one of the pupils in Grade VA. The solid line represents the curve for the first test and the dotted line that of the second test. The results of sets B to O inclusive were weighted in such a way that the graph would be a horizontal line if the pupil were equally proficient in all of the fifteen sets of the test. Since the same weights were used in connection with both sets of results it will not be necessary in this comparative study to enter into a detailed description of the derivation of this system of weights.[1] The solid line

[1] The system of weights was derived from the results from all the grades. The method is too involved to be explained in brief form. See Appendix, p. 254, of *Measuring the Work of Public The Schools*, Cleveland Survey, for a table showing the relative difficulty of the fifteen sets of the test. A similar table forms the basis of the system of weights used in this study.

in Chart I showed the pupil to be weak in division (sets D, K, and N). Corrective work was accordingly given on those sets. Note the effect of this assistance in the pronounced upward bends in the curve at sets D and N.

Chart II shows the curves of another pupil of the same grade, who made a very poor record on the first test. He showed exceptional weakness in sets A, B, F, I, N, and O. On the basis of this diagnosis, corrective work was applied in similar examples. His curve for the second test shows a phenomenal gain over that of the

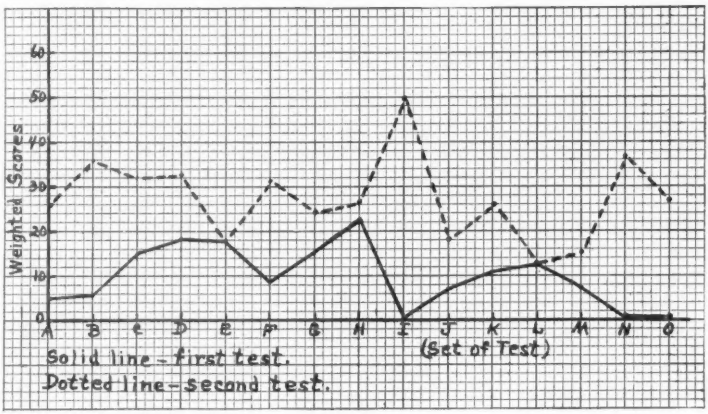


CHART II

first test, but exceptional gains are shown in sets A, B, F, I, N, and O where the corrective work was attempted.

The two charts indicate the excellent results which can be secured by a teacher who uses the results of a standard test to locate points of weakness in his pupils and who applies proper corrective treatment.

In this grade, using the first type of drill, there was an increase in the median total score[1] of the class of 94 per cent and a decrease from 0.53 to 0.21 in the quartile coefficient of deviation[2] in the total scores.

[1] The total score for each pupil is the sum of fifteen weighted scores of the test.

[2] The quartile coefficient of deviation is found by arranging the scores in order from the lowest to the highest. The first quartile is located on this scale one-fourth

In the second type of drill used in Grade VIIB, in which class drill was supplemented with group drills to the slow members of the class, there was an increase of 78 per cent in the median total score of the class and a decrease from 0.47 to 0.35 in the quartile coefficient of deviation.

In Grade VIA, using the third type of drill, class drill supplemented by explanations to the class as a whole, there was an increase of 73 per cent in the median total score and a decrease from 0.41 to only 0.40 in the quartile coefficient of deviation.

A comparison of the results of the three types of drill work shows: (1) All three types of drill produced very large increases in the achievements of the pupils. (2) Class drill supplemented by individual help at the points of weakness as diagnosed by the first test proved much more efficient on account of the exceptional decrease in the variation among the members of the class. This decrease in variation was shown by the decrease in the quartile coefficient of deviation. (3) It has been shown in both the first and second types of drill that individual variations which some writers ascribe to hereditary influences may be greatly modified by appropriate instruction.

of the number of scores up the scale. The median is a point on the scale in which half of the scores are above this point and half below. The third quartile is located three-fourths of the distance up this scale. The quartile coefficient of deviation is found by subtracting the first quartile from the third quartile and dividing this difference by the median score. The wider the variation in a class's scores, the larger will be the quartile coefficient of deviation, and vice versa.

THE TEACHER'S HOME

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In the extended campaign now going on for the betterment of the rural schools in the United States, perhaps there is no single factor that will contribute so much permanent benefit to rural education as the teacher's cottage. New and enlarged courses of study, modern school buildings, expensive apparatus, and greater facilities for industrial education will not in themselves give us a better system of rural schools. The hope of our country schools lies in securing first-class teachers and in retaining them longer than one term. A home, built, furnished, and maintained by the school district, in which the teacher may live while serving her community, will do more than any other one thing to get good teachers into the country and to keep them there.

The home furnished to the teacher by the school district has been called by different names in various parts of our country. In this part of the West it is usually spoken of as the teacher's cottage; in some states, particularly in the South, as the teacher's manse; in many other states, as the teacherage, and in old, classical New England as the dominage.

This residence, whatever its name, is built near the schoolhouse, usually on the school grounds, or as part of the school building. The style of structure ranges through varied architectural schemes from the lean-to, the shack, the school attic apartment, the cedar-shake cottage, the one-room cottage, the tent-house, the old, abandoned schoolhouse remodeled, the six-room bungalow, the double house of ten or twelve rooms, to the modern residence—the cost varying from $50 to $6,000.

The teacher's cottage is to the teacher what the parsonage is to the preacher. It assures a suitable home for the teacher while teaching her school, where she may rest and have her privacy,

which is so vital to the best efforts of all teachers. It is chiefly in connection with the rural schools that teachers' cottages have been built, and it is only within the last decade that our educators and school officials have seen the promise of them and urged their erection.

The state of Washington is usually accredited as erecting (1905) the first teacher's cottage in the United States, but the writer finds this antedated by one erected in Hall County, Nebraska, Rural District No. 1, in 1894, at a cost of $1,000 in gold. As far as we can learn, this was the first home built for a teacher by a school district in the United States. It is a frame structure, 22 by 28 feet, and 14 feet high, having an addition 12 by 16 feet and 10 feet high. It contains seven rooms, two halls, a screened porch and a cellar. The residence is kept in good repair, and has been used constantly all these years, having been occupied during the last twelve years by the teacher of the district, Mrs. Theresa Sullivan, and her two sons.

But to the state of Washington must go the honor of inaugurating effectively the movement for teachers' cottages. State Superintendent of Public Instruction Henry B. Dewey, in 1911, sent a circular letter to the superintendent of public instruction in every state in the United States inquiring of them what had been done regarding the erection of cottages for teachers in connection with the public schools. Forty-one answers were received. Thirty-four had no cottages; two had one each; three had "very few"; and one state (South Carolina) replied, "a considerable number of schools supply cottages for teachers" (Washington State Department of Education, *Bulletin No. 7*, 1911).

This inquiry was the first attempt to secure data on the erection of teachers' homes in this country. At this time Washington already had 17 districts furnishing homes to teachers. Now it has 112 teachers' cottages. This very remarkable growth is due chiefly to the enthusiasm and leadership of Josephine Corliss Preston, present superintendent of public instruction of Washington, who, as assistant superintendent of Walla Walla County, established in 1905 the first teacherage in that state by converting an old, delapidated, portable cook-car into a home for the district

teacher, when this teacher was about to leave her school because she could find no place to board.

In March, 1916, the writer sent a questionnaire to every state in the union, seeking information regarding the growth of the movement to erect teachers' cottages, their method of maintenance, construction, and size, and their feasibility. From 48 states, 40 state school officials sent replies, and while the number of cottages was not exactly stated in all cases, the replies show over 600 teacherages in the United States. It may be a surprise to know that this number belongs chiefly to the South and to the Northwest. In the South there are over 200, and this number is exceeded in the Northwest. The New England, North Atlantic, and North Central States have very few teachers' cottages; New York, Pennsylvania, New Jersey, Delaware, Maryland, New Hampshire, Vermont, Connecticut, Rhode Island, Indiana, Michigan, Wisconsin, and Kentucky report none. In the West, Kansas, Wyoming, and Utah report none. Washington has 112, Oklahoma 58, Tennessee 35, North Dakota 30, Oregon 29, South Carolina 26, and Montana and Georgia more than 20 each.

There are some interesting facts connected with the growth and evolution of the teacher's cottage. In Nebraska, where the first one was built in 1894, the movement has spread very slowly, for this state reports less than a dozen. Kansas, with almost 8,000 one-room rural schoolhouses, does not have a teacher's cottage. North Dakota, with 30, is in contrast with South Dakota with only one which is connected with a consolidated school, twelve miles from any town. Montana has 20 odd, and Colorado 60 or more; yet Wyoming, which is between these two states, has none.

Most European countries are far in advance of us in providing homes for teachers, as is true regarding many things concerning rural education. For many years, homes have been built and furnished free to teachers in Denmark, Germany, Norway, Sweden, and England.

In England the Board of Education draws all plans and approves all cottages built in connection with schoolhouses. The cottage has been standardized. Every cottage must have a parlor, kitchen, scullery, and at least two bedrooms. The staircase must

be directly accessible from the entrance as well as from each room. The smallest dimensions that will be approved by the Board are:

	Feet
Kitchen	12×10
Parlor	12×12
One bedroom not less than	12×10
One bedroom not less than	9× 8

In Victoria, Australia, in 1914, 17 new cottages for teachers were erected, and 22 remodeled. This country has already 1,404 teacherages—more than one for every two schoolhouses. Here the state board must also approve of all plans for cottages.

In most states in the United States where cottages are furnished, they are paid for by local levy, while in a few states there is no legal provision for their erection. In the early days in Washington there was no such provision, but cottage-building went on just the same. In a few states, cottages are built as a part of the schoolhouse. Then there can be no question as regards maintenance. In 1915, Minnesota legislated specifically for teachers' homes by authorizing school boards in consolidated districts to "acquire sites of not less than two acres, and erect necessary and suitable buildings thereon, including a suitable dwelling for teachers, when money therefor has been voted by the district" (sec. 29, Laws of 1915).

In a few cases the teacher's house has been built and furnished by popular subscription, or from money earned by giving socials. Few states report charging rent for the cottages, but in some of them a free home is counted as part salary. Usually the district furnishes the cottage completely, while in a few everything is furnished except dishes, cooking utensils, bedding, and linen.

As was said, these homes vary in architectural beauty from the lean-to, costing about $50, to the modern residence, costing $6,000 or more. From three to five rooms is the size most commonly erected. The better, more costly and modern buildings are found with consolidated schools, where the entire teaching force may make its home. Frequently the house is built double—one side being occupied by the principal and his family, and the other side by the teachers. The most novel as well as the most assured home for the teacher is reported from Georgia. Miss C. S. Parrish,

state rural school supervisor, writes, in speaking of the inchoate condition of the movement in that state: "I know one teacher who has a portable house, 'pitches' it in a patron's yard, and moves her house when she removes herself."

The advantages of the teacher's cottage justify its maintenance. First, it attracts better teachers to the country. After many years of observation on this point, Josephine Corliss Preston of Washington asserts: "Let it be known that a district furnishes a school cottage for the use of the teacher and that district may have its choice from among the best teachers the state affords."

Secondly, more married men teachers will go into the country schools if cottages are furnished. Eighty-two per cent of the rural teachers of Denmark are men. This is due chiefly to the fact that free homes are furnished with all rural schools, together with a few acres of ground where the man and his family may live during the entire year. With the consolidation of schools and the introduction of agriculture and industrial work into the rural schools, more married men teachers become an absolute necessity, if our country schools are to approach the efficiency of the city schools, and become real community centers.

Thirdly, the teacher's cottage gives the teacher privacy and rest which is not possible when she is boarding, even in the best-regulated farm home. Perhaps the teacher, more than any other person, needs, after working hours, rest and quiet. She needs regular meals and a comfortable sleeping-place. The rural teacher who is regularly aroused during nine long months—often Sunday included—for a five o'clock breakfast, eats a cold lunch, and then waits, after walking through snow, mud, and rain, for a six or seven o'clock dinner; who is obliged to sleep in a cold room with boisterous youngsters, becomes a promising candidate for the hospital or the sanitarium. Many teachers never have an evening alone, and their study-room is the living-room of the family. Can anyone blame the teacher for going to town every Friday evening to remain until Monday, or to the city at the first opportunity to remain permanently?

Fourthly, the tenure of teachers is lengthened. This is especially true of married men. One of the greatest evils found in

our rural schools today is the frequent change among teachers. While harm may come from teachers remaining too long in one community, vastly greater harm is very likely to come from having a new teacher every year. Reports show that where the district has a cottage, school directors frequently have a waiting-list of good teachers. The cottage becomes a real home for the teacher—a place where visitors may come; where books, current magazines, and papers are found; where individuality and personal freedom can be enjoyed; where ideals may be realized, and where the teacher can be a real, natural, happy, and independent person—for when you live in the home of another you must conform to the customs, standards, and requirements of others.

Lastly, the teacher's cottage is a strong factor in making the school a social center. Where the principal and wife occupy the cottage, parents and patrons will naturally take a deeper interest in school and social affairs. The cottage offers a place for various social events. Here may gather the pupils, on invitation, for school parties and socials, the parent-teachers' organization, and all teachers' meetings. While the grange meets in the schoolhouse, the domestic science club, composed of farmers' wives, may have their food demonstrations in the cottage. Perhaps the greatest value of all these meetings comes from the personal contact of teacher, pupil, and parent. Rural isolation is broken up. The teacher's cottage throws about the school a homelike atmosphere which pervades all social gatherings, and brings the home and the school closer together.

What, now, may be said against the teacher's cottage? The movement has come upon us so quickly that all objections have not as yet been met. The first objection most frequently heard is that a young woman teacher cannot live alone in an isolated cottage, located near the schoolhouse. This is true. The remedy for this is consolidation. Where this is impossible, then it is easy, usually, for the teacher to get someone to live with her—some relative or one of the larger girls who wishes to earn part of her way and who has a long distance to walk. Such pupils can be found in almost every school.

Another objection is that erecting homes for teachers in the district will delay consolidation which may be greatly needed. Where several good and substantial cottages exist, there is a direct loss to the local district if consolidation takes place, for the cottages will not then be needed. This would be true, but it would seem that any community progressive enough to erect teachers' cottages would also vote for consolidation if such were really needed, and sustain a small loss, while securing many advantages in the consolidated school.

Another objection is that the teacher, after working all day, should not clean, cook, and wash dishes. Saturday should be a holiday for the teacher we are told, and not a day devoted to washing clothes, cleaning windows, and arranging the house to receive the director's wife who comes with her neighbor to inspect and judge the teacher's housekeeping ability. These arguments seem plausible, but most evidence in the matter seems to show that a reasonable amount of such work is enjoyed by teachers occupying cottages. Most active and ambitious teachers will welcome the opportunity to do a little such work—it is domestic science at first hand. The testimony of teachers living in cottages, as gathered from various reports, overthrows the objection that the home cares connected with a cottage are too many and too burdensome for the average teacher.

Occasionally, we hear objections to the teacher's cottage from one of wide and successful experience. Such comes from State Superintendent J. A. Churchill of Oregon. Commenting upon the feasibility of the plan, he writes:

> So long as a large majority of teachers in the rural schools are young, unmarried women, it is absurd to attempt to persuade school boards to build these teacherages. An unmarried woman teacher will not violate the proprieties by living in a cottage all alone, removed some distance, perhaps, from any other residence. Then again, if a teacher has given without stint all of her energies to the work of the day, she should not be required to go to a cottage, cook her own meals, and spend her evenings without the companionship of some good woman. The teacherage is all right for some unmarried man who may wish to "batch" it, or some married teacher with a family.

But all these objections are being met one by one, and the erection of teachers' cottages is bound to continue. All industrial

concerns now fully recognize that the best way to increase the efficiency of their workingmen is to improve their home conditions. Just so with the teacher. If our rural schools had comfortable and convenient cottages for teachers, they would at once have better teachers and more men teachers; tenure for teachers would be longer and standardization of schools would be easier; teachers and parents would become friends more quickly, and the school would more likely become a strong social center.

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